Virginia WILDLIFE

DECEMBER, 1953

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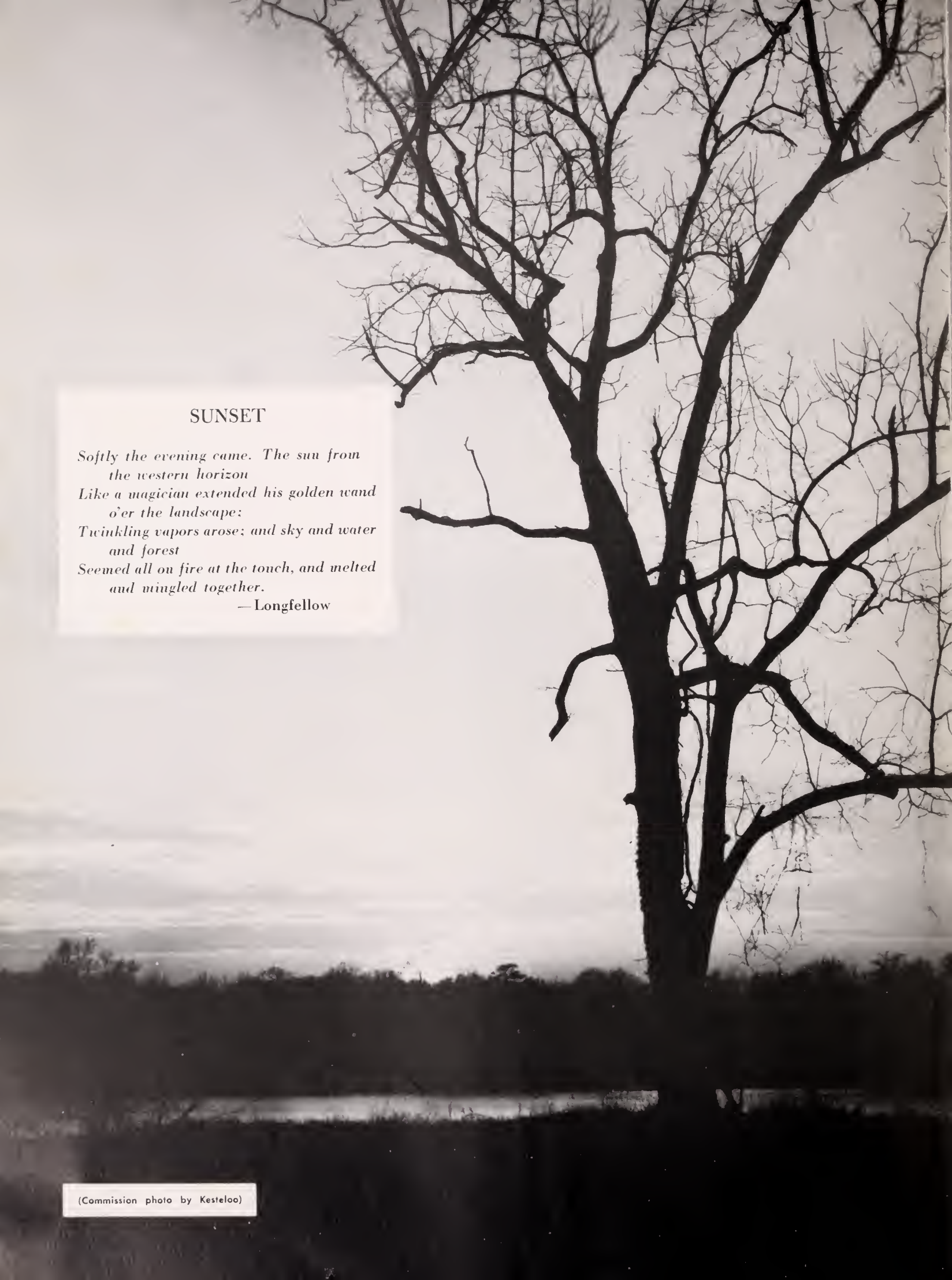

SUNSET

Softly the evening came. The sun from
the western horizon
Like a magician extended his golden wand
o'er the landscape:
Twinkling vapors arose; and sky and water
and forest
Seemed all on fire at the touch, and melted
and mingled together.

—Longfellow

(Commission photo by Kesteloo)

Virginia WILDLIFE

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond 13, Virginia

A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and Related Natural Resources, and to the Betterment of Hunting and Fishing in Virginia

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Cover

For our December cover this year we have chosen the four-color water color painting of two white-tailed deer standing in newly fallen snow, surrounded by Christmas holly and a forest background. We think the artist has captured the Christmas spirit with a wildlife touch very well.

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Reindeer and Christmas

VERY soon Christmas will be with us once more. The spirit of Saint Nick will descend upon millions of our countrymen and rejoicing and merry-making and well-wishing will take place. The youngsters will shriek with delight at the lighted evergreen tree and gifts will make them happy. Legends and stories will be read and recited by anxious parents and teachers, and the tots will thrill to the tale of a certain "right jolly elf" who with eight tiny reindeer will stop at the house during Christmas Eve and unload a bagful of toys. The names of Dasher, Dancer, Prancer, Vixen, Comet, Cupid, Donder *and* Blitzen *will be mentioned and will gladden the hearts of young and old. Reindeer at Yuletide are legend, of course, but there are some very real ones that serve a most useful purpose to man. We might take a few moments then to look at the reindeer as he really is.*

What we know as reindeer in America is really the caribou. This is a member of the deer family with rather large and slightly palmated antlers. Some experts who make animal study their business believe there are well over a dozen kinds of caribou in America and several more in Eurasia.

These unusual animals fall into several races with one group about twice the size of another. Average weight of caribou, however, is between 200-300 *pounds for males and* 150-250 *pounds for females. Interestingly enough the caribou or "reindeer" of America is the only member of the far flung deer family in which the antlers appear in both sexes.*

Where do the reindeer live? Where is their home? Actually most of North America from latitude 45° *in the east and northward—that is, to the line across Canada from the north side of the Great Lakes eastward to Nova Scotia—is caribou land. One race extends its range in the Rockies as far south as the Canadian border. It is also found across the top of the world in Greenland, Scandinavia and Siberia.*

The reindeer is the only animal of its type with the possible exception of the musk ox that actually thrives and multiplies in the arctic and sub-arctic wastes. It is an important food and clothing item for Eskimos and northern Indians. In Europe it is also used for transportation. In many parts of Siberia these deer are domesticated to pull wagons, sleighs and carts. Over ice or snow one deer can haul nearly 500 *pounds and make* 40 *miles a day.*

The Laplanders of Norway and Sweden and Finland are great reindeer raisers and have herds of nearly a half million head. The Russians are said to have twice that many.

Reindeer in America no longer darken the snowy tundra of northern Canada, migrating in the thousands like they once did. Persecuted by man and fire and wolves, their numbers have retreated farther and farther into the bleak arctic. Today reports say there are only 40 *caribou left in the United States, inhabiting Minnesota, Idaho and Washington. Canada and Alaska still have some fairly large herds but these are dwindling rapidly. A great North American deer is passing from the scene.*

—J. J. S.

The Christmas Goose

MANY years before America was discovered, and with it the famous wild turkey, the goose—both wild and domestic—held the center of attention at Christmastime and other festive occasions. Always a favorite, even with primitive peoples who dedicated it to their pagan gods, the goose has been prized for its fat, flesh and feathers. Even as far back as the early Romans we learn that the goose was considered sacred to Juno. The legend of the saving of the city by the alarmed cries of geese is familiar to most everyone.

In Europe the keeping of a "feather bed" is as old as Adam. Besides furnishing the soft down for the light but thick bed covering, the goose's finer down went into pillows, cushions and sleeping bags.

Goose grease or fat is another valuable by-product of the Christmas goose. For centuries people have used this grease not only in cooking but also for such ailments as rheumatism, chest colds, bronchitis, and general aches and pains. Lastly, the heavier feathers of the goose's wings were tools of the warriors and huntsmen, for they helped make up the shafted arrows of archers and served as quills for clerks and writers. Certain goose bones too were useful as meteorological instruments and wingbones with feathers attached made excellent hearth brushes.

Though some have looked upon the falsely defamed goose as a stupid bird, it is really not. Among the wild geese, the stately Canada goose is considered one of the craftiest, smartest, wariest birds of the waterfowl family.

—J. J. S.

(S. C. S. photo)

By L. B. DIETRICK*

CONSERVATION is a word, which over the past decade, particularly, has become as well known as any word in the English language. As a result, it has been used in almost every conceivable way in helping to sponsor worthwhile efforts. Thus we hear of conservation of our natural resources, conservation of our health, of our energy, of our time, of minerals, of water, of game and wildlife, conservation of forests and woodlands, conservation of wealth and conservation of human resources. These are but a few of the ways in which the word is commonly used.

Basic to all these forms is the conservation of the soil. Much of what can be said, therefore, about the conservation of the soil may be equally as applicable to the conservation of other resources, both inert and alive. Unless the soil is properly taken care of, little good can be secured along other lines of conservation. For the moment, then, I shall confine my remarks to the conservation of the soil. Just what do we mean by soil conservation? For our purpose the dictionary definition will serve. Here soil is defined as the loose top layer of the earth's surface as distinguished from solid rock. We are concerned therefore with but a minute part of the total volume of the earth, only that few inches composing the crust, but yet upon which the very existence of ourselves, all life and the nation depends. The term conservation is defined as the act of keeping from loss or *injury*. It is not enough just to prevent the loss of our soil through erosion by wind and rain. That might best be accomplished by returning most of the land to forests or other natural coverage. It must be maintained in fertility and productiveness for the particular usage which will best serve man. I like that definition of conservation whether it be of soil or other phases. It is not enough just to conserve, but to conserve for what. Some ardent enthusiasts would have us believe that the chief end of soil conservation is to conserve the soil as an end in itself. The true conservationist is concerned primarily not in conserving the soil just for itself, but in conserving the soil so that it will best serve man. I like the definition of conservation in the broad sense as defined by President Taft, who said: "Conservation as an economic and political term has come to mean the preservation of our national resources for economical use so as to secure the greatest good to the greatest number." Emphasis here is on the preservation for use.

In the order of creation, soil is older than man himself. Divine Providence has loaned the soil to man as a heritage. It does not belong to man in any one generation, but is simply in his keeping. "The Earth is the Lord's and the fullness thereof" is just as true today as in the day of the Psalmist. History, however, is replete with examples of where individuals and nations have forgotten the scriptural injunction spoken by God, "The land is mine for ye are strangers and sojourners." And however this injunction has been disregarded, whether because of ignorance or for wasteful exploitation, the people have had to suffer the inevitable result. Man must earn his bread by the sweat of his brow, but the amount of sweat required and the standard of living exacted is in large part a matter for his own determination. With the neglect of the soil, there inevitably follows lower standards of living in all phases of life. Too often man looked upon the soil and other resources not as his priceless heritage, but as dirt to be exploited to the fullest degree and then to be cast aside as useless.

* Mr. Dietrick is Director of the Virginia Extension Service at V.P.I., Blacksburg, and the new Dean of Agriculture of the College. This address was delivered at the annual convention of the Izaak Walton League of America, Lynchburg, September 19, 1953.

From the standpoint of conservation, history has often repeated itself. Virginia, too, has been wasteful. The early colonists, sailing up the James River in 1607, found in Virginia a land naturally destined to become a great agricultural area. They found an ideal combination of climatic conditions and soil types. The soils were rich, fertile, and seemingly inexhaustible. John Smith explained the feeling of all when he said, "Heaven and earth never agreed better to frame a place for man's habitation." Another writer stated, "No country affords better facilities for cheaper living." Commodore Maury marvelled at the productivity of the area and said, "Everything which can be cultivated in France, Germany or England may be grown here equally well with other things besides."

Later, settlers in the Valley and in southwest Virginia found conditions equally favorable. Seldom have soil types, climate, topography, and elevation been so favorably combined as in Virginia.

Elevation ranges from sea level to over 5,000 feet with its modifying effect on climate. Soil ranges from the sands and sandy loams of the eastern section to the heavier clay loams in the Valley and southwest. These natural advantages have admirably suited all sections of the state for some type of agriculture.

These early colonists found the Indians practicing a type of agriculture from which they learned much. It did not provide, however, for the intensiveness required to produce the crops, particularly tobacco, needed by the early colonists. Land was cropped excessively and then cast aside. It was more economical to clear new lands than to take proper care of lands already cleared. In general, such a system prevailed for a long period of time. As a matter of fact, such a system still prevails on some individual farms. For regardless of the pride which may justifiably be taken in the splendid progress being made along conservation lines, much loss still continues. As I was driving in the country recently, I noted many instances of erosion, because advantage had not been taken of economical practices for conserving the soil.

This early period in the history of our state might be called the period of exploitation. A similar period might be pointed out on almost any phase of conservation. Such a period may have been inevitable. But at any rate, such a period could not last, and a change was just as inevitable as the original action. In many ways, the change in attitude was an outgrowth of this earlier period of reckless disregard of resources.

Virginia people have probably never been more conservation minded than they are at the present time. How did this change come about? Partly by individual effort and partly by united action. In spite of soil wastage, there has probably never been any one particular time when some few individuals did not see the need for and preach conservation. In the first report of the Virginia State Commissioner of Agriculture for 1887, a prominent gentleman is quoted as saying of Tidewater Virginia, "By farming properly, the soil will last any number of years, and will always produce good crops." He summed up briefly but fully the essence of soil conservation-farming properly. Many factors have entered into helping the farmer in "farming properly" and arousing public interest in conservation. A few of these might be pointed out briefly.

Public legislation has been an important factor down through the years. Much of such legislation has been passed during periods of exploitation and has been designed to correct the evils of exploitation. Much of this legislation has been concerned with education of the people.

The passage of the Land Grant College Act in 1862 has had a tremendous influence educationally upon farming practices, including conservation. By it, not only was the establishment of agricultural and mechanical colleges made possible in the states, but the way was paved for many later developments.

In colonial days, higher education was available at only a few institutions, such as Harvard, Yale, and William and Mary. After the Revolution, the states began to organize universities. Both the publicly and privately controlled institutions developed side by side. Patterned largely after the European universities, the curricula was largely classical, and professional education was largely for the leisure classes, government leaders and professional men. As one writer has expressed it, the fields of agriculture and mechanic arts were beneath the dignity of these institutions. Agitation against the restricted type of education grew, but little heed was given by the existing colleges. Complacency of established institutions was the rule of the day. However, during the 1850's agitation increased to the extent that Congress debated the issue and in 1859 passed the Morrill Act, only to have it vetoed by President Buchanan. The people, however, were not to be denied.

Conservation is much more than a word, it is a program of action. Here bicolor lespedeza plants are heeled in for future wildlife food plantings.
(Commission photo by Mullins)

Aimed at replenishing acres barren of wildlife, food plantings such as this aid in conserving what was once believed a waning resource.
(Commission photo by Kesteloo)

That act was again passed in 1862, signed by President Lincoln, and became law. Thus was born the Land-Grant College movement, a new departure in education. I quote one paragraph from this act to show the wisdom of those who have gone before and without whose foresight V. P. I. and other similar schools could never have been established. This act was to provide for in each state "the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

Subject matter in agriculture was extremely limited in those early days. In many schools, one man composed the entire agricultural faculty. A short 25 years after the Morrill Act was passed, Congress recognized this need, and in 1887 passed the Hatch Act to provide research as a basis for agricultural development. The purpose of the Hatch Act as set forth in the Act itself was "to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science."

It was not enough, however, to provide for on-campus students and to find out facts through research and to make them available to people not residing on the campus through bulletins, articles, etc. Proper dissemination of such facts and seeing that such facts were translated into action required a missionary force, as it were. And so a quarter of a century later, 27 years to be exact, the Smith-Lever Act was passed establishing the Extension Service. The purpose of this act, as stated therein, was: "To aid in diffusing among the peoples of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same."

V. P. I., which was established in 1872, is one of the 69 Land-Grant Colleges now existing. A recent publication of the Office of Education, Federal Security Agency, admirably sums up the service of these Land-Grant institutions: "They have broadened the base of higher education bringing it within the interest and attainment of vastly larger numbers of people than would otherwise have been reached. The whole realm of higher education in this country, and to a lesser degree even in some other countries, has been profoundly influenced by the developments of the Land-Grant colleges and universities in popularizing higher education. They have demonstrated the partnership of the Federal and State Governments in the maintenance of a system of higher education which is designed to fulfill federal, state and local needs. They have spread widely the concept that higher education is something in which all the people have a stake. They have, therefore, a place of deep affection in the hearts of the people. They are growing in strength and influence with each passing decade."

Thus, education, research, and extension followed in logical order. In your own School of Agriculture at V. P. I., the College instructs your sons and daughters, the Experiment Station discovers facts to assist farmers, and the Extension Service extends the campus of V. P. I. to all counties and communities of the state. Throughout the 81 years of its existence, V. P. I. has had a profound influence upon the agriculture of the state. Its thousands of graduates have returned to the farm, served as county farm or home agents, vocational agriculture or home economics teachers, SCS technicians, FHA supervisors, or other professional workers, and thereby contributed much to the knowledge of farm groups on soil conservation.

The passage of the Virginia Soil Conservation Districts Law in 1938 gave increased impetus to the program on soil conservation. Each Soil Conservation District is an organization of land owners banded together for soil and water conservation and wise land use management. The districts, when functioning properly, offer an exceptionally good medium through which all agricultural agencies can work. The strength of the individual district is largely dependent on the amount of assistance which it secures from these other agencies.

Other agencies created by legislation have contributed much to a sound program of soil conservation in the state. Vocational Agriculture, a state agency, has since its inception promoted soil conservation through its contacts in the classroom and with evening classes of farmers. They have done an excellent job in using the information available from the Land-Grant College.

Both the state and federal forestry departments are doing an outstanding job in the conservation and protection of Virginia's woodland, an asset which is too often relegated to the background by the farmer and land-owner.

(Continued on page 26)

STILL HUNTING: the Lost Art*

By FRANCES E. SELL

(Commission photo by Kesteloo)

Blundering drives and dependence on sheer luck are all right, but there is no thrill for the woodsman equal to the feeling of having outwitted his game by his own skill and knowledge of its habits.

AMONG RIFLEMEN who are ken to the lonely trails and the silence of the woods—the ones who know the pulse-tingling thrill of game jumped—there is no substitute for still hunting. The fact that it is rapidly becoming a lost art is not because it has been found wanting, or that more efficient methods of hunting have been found, but rather because the average hunter is apt to hunt with a crowd, to drive the game . . . seldom, in fact, knowing that there is any other method of hunting.

A still hunter will take game when drives in the same cover are not productive. He is not confined to any predetermined pattern of hunting as in group hunting, but develops it as sign and cover indicate. Too, the still hunter often works cover which couldn't be hunted in any other way, due to the type of territory or the game itself. Elk and moose come readily to mind, as well as some wilderness deer territory, as game and cover which can be still hunted profitably.

The basic bit of knowledge which the still hunter uses is a familiarity with the game's reaction to movement and, to a lesser extent, sound. The still hunter knows that certain kinds of movement in the brush are alarming to game, that game animals are constantly watching for any movement which will warn them of danger. Sound is also alarming. Unfortunately, many hunters with little experience in the woods never carry the observation farther. Actually, the step is but a short one to the obvious observation that movement is one of two types so far as the game is concerned. It is either foreign to the cover, and therefore alarming, or it is commonplace and not alarming. Again, that is true of sound!

There is always some movement in game cover. The

* Taken from AMERICAN RIFLEMAN, Volume 99, Number 1 by special permission.

wind is constantly moving the leaves, the fern and bracken. During the autumn, leaves are falling, creating both movement and sound. Heavily snow-laden limbs are forever releasing their burdens, the freed branches swaying, the snow falling. The movement is occurring where the game is feeding or bedding, and consequently is not alarming.

But cover moved violently, such as it would be if disturbed by a careless hunter going through the woods, is another matter. Then the hunter is signaling danger to the game as nothing else can. No matter if he is moving without a sound, the game will still be alarmed at such movement. Coupled with the loud breaking of limbs it creates, such movement is a dead giveaway.

The ideal hunting pace for the rifleman in the woods gives about the same movement to the cover as that imparted by a stray breath of wind. In maintaining that pace, the hunter in effect becomes invisible to the game until he is actually in the open where he can be seen clearly. In moving thus, the sound of the hunter's progress is that of the game itself, and the game must see him at close range to place him.

While hunting one autumn, I still hunted some brushy ridges where several deer had been feeding and bedding. I was on these ridges with the first light in the timber. A fairly stiff wind was quartering across the cover, swaying the fern and shaking the sere leaves on the trees. I moved slowly, being careful that no brush was allowed to spring back in place after being pressed aside to allow passage through the dense cover.

After I had moved along the ridges for the better part of an hour, I came on a doe feeding. She stopped to regard me, but I had frozen and the huckleberry brush effectively broke my outline. We stood looking at each other from a distance of about eighty yards, neither moving, for five minutes or so. Then she started to move toward me, placing each foot daintily on the ground as if she were walking on eggs. I watched her expressive ears. They were flipped in my direction, trying to pick up some foreign sound. Her nose quested the wind across the cover. She turned her head toward a dense clump of brush. That told me what I wanted to know. Another deer was with her. Whether it was a fawn or another doe, or perhaps a buck, I didn't know. I waited unmoving.

Then, after what seemed like hours, but was probably five or six minutes, the doe all the time moving cautiously toward me, stopping to stamp her front feet and snort, a nice four-point buck stuck his head out from behind the huckleberry brush. Then he stepped out in the opening with all the proud disdain of a buck at the beginning of the rut. I dropped him there on the ridge, a prime piece of venison.

Of course, there was luck in taking that buck, as there always is in hunting. But at the same time I did make a contribution to that luck by hunting in a manner that enabled me to locate game in the heavy cover.

Mostly, still hunting is a matter of going slow—extremely slow. Sometimes I spend as much as thirty minutes in covering fifty yards. A good day's still hunt is never more than a mile or so in typical deer cover. Those hunters who come into camp tired after a day afield have not hunted properly. The long distances they travel are interesting as a good day's hike, but it is a mistake to call it still hunting.

Of course, the pace that a still hunter takes is not the whole story of his manner of hunting. He must be well informed on the reactions of the game to any given circumstances, and that is a big order where the game is deer in heavy cover. It is no larger, however, than the knowledge which an expert angler must have to take trout consistently with a dry fly.

A good example of the information he must have is shown by the hunter's regard for wind drift in the cover. It is fundamental that one hunts with the wind blowing from the cover to the rifleman. But there are times when it can be made to flush game.

On one occasion I was hunting through the hills when I heard a shot not more than two hundred yards farther along the ridge. Later I came upon a hunter dressing a nice buck. The hill sloped off towards a swamp there. Between the swamp and the top of the ridge there was a half acre of hazel, affording a good hideout for a deer. Tracks in the snow showed that one had selected it.

The lucky hunter had already put the simple bit of sign to good purpose. He had, after finding the tracks leading into the hazel thicket, settled on a very clever plan of getting a shot. Quite obviously the game would have slipped out on the other side if the hunter had entered the heavy cover to jump it. Instead, the hunter moved up the ridge until he had a drift of wind crossing the cover from him to the hazel brush. He could see the lower edge of the brush, where it thinned out toward the swamp, as well as the far side along the ridge. If the game moved out, there was a good chance for a shot.

He told me that he had expected the deer, if it did move, to break for the swamp, being the heavier cover, rather than along the more open ridge. After waiting for the better part of two hours that is what the buck attempted. The woodswise hunter brought him down with a neck shot at about sixy-five yards. It had taken paitence to wait the deer out. It had also taken a keen knowledge of the game's reaction to the setup.

A whiff of human scent doesn't put a deer to wild flight at once, as many hunters believe. A deer will consider the best chance of escape before moving. Sometimes that will be in lying quiet and letting the hunter go by. At other times it will be by attempting a sneak. Then again it may mean crashing out at full speed, gambling on taking the hunter unaware.

In the case of this buck, the hunter could very well figure what the reaction would be. There was the hunter's scent coming directly to the deer lying in the thicket. It was constant, telling the deer that the hunter was remaining in the vicinity, not moving on. The game became more concerned with the passing of time. He had marked the progress of the hunter by the small

(Continued on page 29)

The Battle for Wildlife

By I. T. QUINN

Executive Director, Virginia Commission of Game and Inland Fisheries

WHEN Captain John Smith landed on the shores of what is now Virginia, he found a vast wilderness of virgin plant life. The adventurers were astonished by the size, height and variety of the trees. The first ones seen by the voyagers of 1607 were the pines along the coast at Cape Henry and later travelers claimed they knew when they were approaching land by the fragrance of the pines far out to sea. Huge cypresses were found and the cedars of Virginia were said to rival the fabled ones of Lebanon.

In the aboriginal forest, so remarkably free of underbrush, was a great variety of hardwoods too—walnut and oak primarily, mulberry, sassafras, locust and some elm. Chestnut trees were especially plentiful at the Falls of the Powhatan (now the James), chinquapins thrived in the thin soil of barren ridges, and hazel trees grew both in swamp and highland.

Indians roamed the woods and paddled the river courses and, while their number appeared quite large to the few colonists, their actual population was probably small. There was great discrepancy in the reports of early writers, but modern authorities have estimated that perhaps 50,000 Indians, including all the large tribes, were all that inhabited early Virginia.

Along the rivers the early settlers saw the maizefields of the Indians and here and there in the forest were open patches of land cleared with stone hatchets and fire, cultivated with wooden hoes. Near their wigwams the Indians planted gardens with the vegetables not grown in the fields with their corn, such as muskmelons, gourds and tobacco. Other vegetables raised were pumpkins, cymkins, squashes and May-apples.

The streams and the bay teemed with innumerable varieties of fish. There were so many that the Indians killed them in brooks and creeks with sticks. The colonists reported that during spring migrations the small streams were so full of fish that it was hard to ride a horse across without treading on them. In Smith's voyage of discovery of the Chesapeake, the Englishmen are said to have scooped the fish directly into their frying pans! Oyster banks rose above the surface of the streams at low tide and more than once kept the settlers from starving. Even with liberal allowance for the exaggeration of early Virginia fish stories, there still were incredible amounts of fish.

In those days there was little farm game, because farms as we know them today did not exist. But forest game abounded. Allusions in early descriptions of Virginia indicate that at one time buffalo ranged east of the mountains. Deer herds thrived in tidewater forests. Bear were plentiful at first towards the coast in what is now Princess Anne County, but gradually they retreated to the Great Dismal Swamp. There were beavers in all the streams suitable for erecting their dams. Otter skins were particularly esteemed by the Indians. Minks, bobcats, martens and several kinds of squirrels were abundant and King James sent for Virginia squirrels to ornament the royal parks.

The opossum excited great curiosity and the raccoon, probably because of the shape of its head and its arboreal habits, gave rise to the myth that there were monkeys in Virginia. There were wolves, small but ravenous, many gray and some red foxes in the woods.

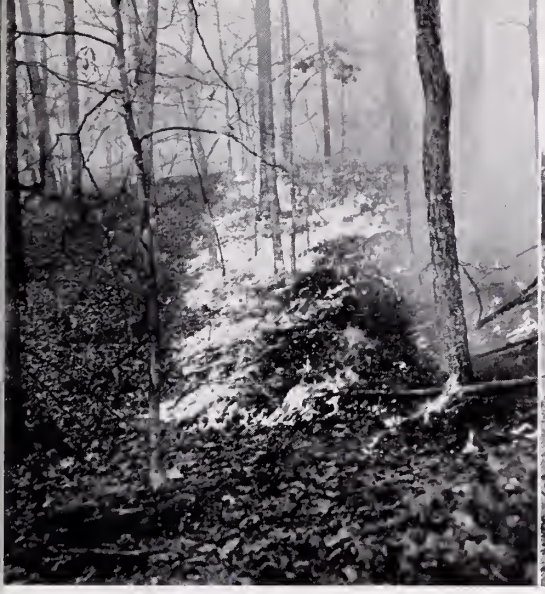
The sky in those days was literally darkened by the

Virgin timber and gigantic flights of waterfowl greeted early settlers of Virginia, but while deer herds thrived in Tidewater, Virginia, the bobwhite quail was yet to increase its numbers far beyond those found before agricultural expansion.

(Aubrey Shaw, Jr., photo)

(Wide World photo)

(U. S. F. S. photo)



(U. S. F. S. photo)

(S. C. S. photo)

(Commission photo by Kesteloo)

Certain destructive forces are continually hacking away at our wildlife. We can overcome them only by cooperatively conserving and restoring the lands and waters upon which it lives.

great clouds of waterfowl in their migrations and 40 years after the founding of Jamestown Robert Evelyn described a flock a mile across and seven miles long. Trumpeter swan, wild geese, canvas-back, red-head and many other species of ducks and other waterfowl passed overhead in seemingly unlimited supply.

In the beginning there were flocks of wild turkeys in all the forests, even in the woods close to Jamestown. When one of the first settlers, Ralph Hamor, visited Powhatan, he feasted not only on crabs, oysters and venison, but also had broiled turkey for breakfast.

When Captain John Smith returned to England to recruit additional settlers he gathered a crowd around him in Piccadily Circus and told them all about the fabulous new land of Virginia. There things would be different. There they could hunt and fish to their heart's content. No longer would the game belong to the royalty and landed gentry as it did in England and other European countries, but every man, woman and child could go out and hunt as much as he wished.

It was a good selling point and Smith persuaded many to join the settlement. So they came, your ancestors and mine to a new world where they could have the freedom to hunt and fish as they pleased.

As America grew in population and as new industries, tools and machines were developed, the picture of hunting and fishing gradually changed. People began to take up hunting and fishing less as chores to secure food than as a recreation. When fowling pieces were modernized and guns for large game were improved, the hunting of wild animals and birds clearly developed as a singular sport and has remained so with us ever since.

As the wildnerness gave way to cultivation and farms sprang up over the length and breadth of the land, rabbits and bobwhite quail began to multiply, but the larger forest game mammals began to disappear. Buffalo and elk could not withstand the encroachment of civilization and either died out, were killed off or were forced to find homes to the more forested west. Some forms, such as deer and turkey, could stand the pace of civilization better and lingered on in the ever dwindling forests and were able to hold on until today.

The westward surge of civilization finally overtook the buffalo and the elk. The elk became extinct in Virginia until a small herd was brought in from the Jackson Hole country of Wyoming to several Virginia counties west of the Blue Ridge.

As Virginians, however, we need not be afraid of the comparison between the wildlife resources we once had and those we have today. Much has happened to our environment and while we have an abundance of some forms of wildlife, some other forms we had were in the minority. Today the picture is somewhat reversed and we have in greater abundance than in early days many of the smaller forms of animal life, while the larger forest game animals, with the exception of deer and some bear, are gone.

Recent conservation measures, however, have given us reason to have great hopes for wildlife. Research has yielded much basic information and we have learned a great deal about managing wildlife forms.

During the late 1930s and the few years that followed, the Virginia Commission of Game and Inland Fisheries in cooperation with many counties and sportsmen citizens west of the Blue Ridge imported 1783 deer from out of state and restocked them where they could have suitable habitat and habitat protection.

The experiment proved successful. So productive was this experiment and so wise have been the management practices in recent years that for several years we have had a short open season on deer in the sections of the state where the deer had been introduced. In fact, the deer herds have been brought back so effectively in some places that the deer population got out of hand and the animals were found to be outstripping the food supply. This resulted in the Commission taking action to kill off some of the doe deer since the killing of bucks alone will never reduce the herd. To halt the phenomenal increase, it is necessary to curtail the

source of supply which means to reduce the number of female deer.

Today the ratio between the forest and agricultural lands of Virginia appears to be fairly well stabilized. The big problem from here on is proper land use and management. With this in mind, the Commission has set up a long range wildlife program for both the forest game species and the farm game species of wildlife. Waterfowl too has entered the picture and the Commission has likewise engaged in a long range waterfowl restoration program.

Virginia's program is now well established. It is balanced. It is long range. Evidence is beginning to show that our management practices are proving effective. If such a program is allowed to continue, grow and expand, Virginia sportsmen should not be solicitous about a reasonable supply of game in the fields, woods and waters in the future. The key to the whole program, however, is public acceptance and participation in the program.

The present fight for wildlife can be likened to a field of battle between two adversaries. In our battle for wildlife we have certain destructive tendencies which are perpetually hacking away at our wildlife. We also have forces of conservation and restoration. Unfortunately, however, the battle has been rather one-sided in the past and the forces of destruction have been getting the best of it. The pendulum can be swung the other way and the force necessary to swing this pendulum is public cooperation. Cooperation and teamwork are absolutely necessary if wildlife is to survive. Just as the Secretary of War and his combined general staff never has nor ever will win a war and just as a general and all his staff of officers never won a battle single-handed, without the men on the firing line who fight and conquer, so the tremendous job of conservation and restoration cannot be accomplished by the services of the Game Commission alone. It is the rank and file of hunters and fishermen on whom we must depend in the battle for wildlife, to safeguard our game and other renewable resources.

Today the wildlife enthusiast must realize that he has a greater part to play in the game for better hunting and fishing than merely buying a license. The latter is simply incidental.

While the Game Commission is alert to its great responsibility in the wildlife restoration movement, at the same time it is aware that much of this responsibility for wildlife rests on the individual hunters and fishermen. We can have more game and more of every kind of wildlife if we are willing to accept the responsibilities that confront us. The only way that we as a civilized people are going to have more wildlife is to adopt a well-planned scientific program of management with measures specifically designed to safeguard, to maintain, and to rebuild those wildlife populations which we particularly seek. Many forms of wildlife lend themselves admirably to tools of management and we need only employ those tools to get results. In Virginia, in America, we have the opportunity to manage our resources for a greater abundance. We have the technology, the opportunity and the knowledge of how to create abundance of almost any form of wildlife if we choose really to apply ourselves to the task. If we desire to maintain a high level of recreational hunting and fishing, we can do so. The creation of more abundance is within our power. The way to greater resources is in our own constructive actions.

NASH-KELVINATOR CORPORATION TO HONOR PROFESSIONAL CONSERVATIONISTS

No longer will the professional consevationists—the men whose work increases the hunting and fishing pleasure of the outdoorsman—go unrecognized, the Wildlife Management Institute reports. Beginning January 15, 1954, Nash-Kelvinator Corporation will give a $500 Nash Conservation Award to each of ten men selected by their Awards Committee as having made an outstanding contribution to their work with fish, wildlife, water, soil, or forests.

All employees of non-profit conservation organizations were eligible for nomination for these awards; their work may have been in research, education, enforcement, or administration. In addition, ten awards without a cash grant will go to ten citizens who did something important to conserve the outdoors as an act of good citizenship. Nominations closed November 15th.

Observing Birdlife

By H. H. SMITH*

(Commission photo by Kesteloo)

A BOY once asked John Burroughs how one may know the birds well enough to enjoy them. The great naturalist told him he must go where the birds are and carefully observe their habits. Many cannot often visit the orchards, fields and forests, but they can have the birds come to visit them. Although I live in town, I have had many visitors come to the feeding tray. At one time or another: cardinals, robins, mockingbirds, blue jays, brown thrashers, thrushes, cat birds, chewinks, nuthatches, titmice, cedar waxwings, woodpeckers, juncoes, sparrows, starlings, blackbirds, blue birds, wrens, quail, and others.

Burroughs emphasized the importance of close observation if we would learn about our wildlife and I know of no better way to closely observe birds than by feeding them at home.

Since I began feeding the birds, three thrills have come about in connection with this pleasant hobby. Once, while cardinals, sparrows, and other birds were feeding on the ground, a covey of 14 quail appeared and joined heartily in the feast. After eating the chicken feed spread before them they sought shelter from the cold rain by running under the side of a neighbor's house, forming themselves in a circle—as though challenging me to photograph them. Having learned where they could get a good meal they visited me twice more during the season. Driven from the fields by hunters, quail often take refuge in towns, and may be seen running from yard to yard.

Another thrill was when the feeding tray was bombed! A bomb, in the form of a sparrow hawk dashed down upon a half dozen English sparrows while they were feeding. The feeding tray was under an oak, and the hawk concealed himself in the tree and struck like lightning, but the birds were too quick for him and escaped.

The greatest thrill came when I witnessed a murder in the bird kingdom. Can beautiful birds, man's feathered friends, really commit murder? Call it what you may, they sometimes kill each other. As I stood by the window one morning, my attention was attracted by a bird that resembled a mockingbird. It was standing over an English sparrow that seemed to be quivering and helpless. For about a minute he pecked the sparrow or the head, then suddenly snatched it from the ground and flew away with it. I knew then that I had seen a shrike for the first time.

The shrike has a bill "broad at the base and hooked and toothed at the tip, resembling the bill of a bird of prey. The shrike found in this part of the country is eight or nine inches long, slate colored above, and plain ashy white below, with a black stripe through the eyes and meeting across the forehead." This bird has the peculiar habit of impaling its prey on a thorn, a fence barb, or a forked twig. Ernest Thompson Seton, the naturalist, did not consider the shrike a great evil in the bird kingdom. He says: "His food consists chiefly of mice, noxious insects, and the equally noxious English sparrow, so that the shrike is a bird worthy of all protection."

The shrike suggests an interesting subject for debate: How red is nature in tooth and claw? The poet Tennyson refers to nature as being "red in tooth and claw." How much of that assertion is truth and how much is poetry? There are carnivorous birds and animals, but we are not to think of nature as filled with blood, the result of the strong devouring the weak. Big fish eat little fish, and the fox feasts upon the rabbit, but the sea is still full of fish, and the rabbit is in no danger of being exterminated. Dogs roam at will in this town,—sometimes three or four are seen in my yard at one time,—and yet I am unable to raise a row of snap beans because rabbits have repeatedly destroyed them. It is marvelous how they can escape the dogs, and raise their young, in a town filled with dogs.

Blue jays have the reputation of destroying bird nests, eating the eggs or the young birds, but twice recently robins have raised a brood of young birds in my yard while blue jays were continually around. The robin is a tough fighter when his nest is molested.

I witnessed an exciting race between a cat and a ground squirrel. The chipmunk was caught some distance from his den and the cat was a much faster runner. However, the chipmunk zig-zagged and escaped by climbing a tree. Here nature seemed to work both ways: producing a carnivorous animal and teaching its prey a mode of self-defense.

* Mr. Smith is a birdlife fancier from Ashland, Virginia.

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Late Wildlife News . . . At A Glance

VIRGINIA HUNTING SEASONS CLOSED BY DROUGHT. Unprecedented drought conditions necessitated the closing of the hunting seasons statewide on October 23rd, except for migratory waterfowl. The emergency regulation was put into effect because of the fire hazards from hunters being in the dry fields and forest. After abundant rainfall nearly statewide, the emergency regulation was lifted at 12 o'clock noon, October 29.

WILDLIFE ESSAY CONTEST UNDER WAY. The seventh annual Wildlife Essay Contest got off to a good start, with a deluge of entry cards from schools all over the state. This year's theme is "Wildlife Conservation: Its Meaning and Importance." Grades 5-12 are eligible for the 56 prizes totaling $1000. The contest will close February 28, 1954.

INCREASED CONVICTIONS FOR GAME LAW VIOLATIONS. The enforcement staff of the Game Commission obtained 366 more convictions for game and fish law violations during July, August and September this year than during the same period last year. The total number of game law convictions during the first quarter of the present fiscal year was 516 and the fish law convictions amounted to 841, a combined total of 1357 convictions.

FIRST FATAL HUNTING ACCIDENT REPORT. R. M. Wolfenden, game warden of Wythe County, has reported the first fatal hunting accident and second hunting casualty of the 1953-4 season to the Game Commission. Twenty-year-old Richard Summers of Pulaski was shot in the head by a near-sighted teen-ager who mistook his victim for a squirrel as he looked through thick lensed glasses in the early morning light.

HARVESTER ANTS DENUDE RANGELAND. Red harvester ants have denuded 90,000 acres of public rangeland in the Big Horn Basin of Wyoming. Its foraging to collect grass seed prevents natural reseeding.

TRUMPETER SWAN MAKING A COMEBACK. Early in the century the trumpeter swan was believed to be extinct, but small flocks were discovered at Red Rocks Lake and Yellowstone Park in 1907 and restoration efforts begun by the Federal Government. So successful has been the program of protection that the trumpeter swan population in this country now numbers 577 birds, according to Secretary of the Interior Douglas McKay.

INDIANA OVERRUN BY RACCOONS. Hoosier farmers yearned for the good old 1920's when flappers and college boys wore raccoon coats, for 'coons have been on the rampage in Indiana and in one county alone destroyed 20 acres of corn. The State Conservation Department decided to promote an extended raccoon season to harvest the surplus.

ALASKA'S FISH AND WILDLIFE. A new handbook on Alaska's big game, fur animals, birds and animals, by Clarence Rhode and Will Barker, with illustrations by Bob Hines, is available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. for 25¢.

ANIMAL TRACKS—
and how to know them

By J. J. SHOMON

HISTORICAL records etched in stone tell of man's early interests in animals. Some of the oldest cave markings in the Old World reveal not only man's intense love of nature but also the progress of his intellectual development. The cave dwellers were adept sign makers. So were the early Chinese, Babylonians and Egyptians. American Indians were well versed in sign markings and animal tracks. Early pioneers followed the river courses of the New World to set the stage for the greatest empire on earth, all through an intimate knowledge of animals, their haunts, signs of abundance or scarcity.

Track markings, then, have been a tool of knowledge for man down through the ages. An understanding of animal signs is still important today, and ever will be, for interest and love for wildlife is universal. The modern zoologist and biologist relies heavily on the signs for understanding. The late Ernest Thompson Seton, one of America's most renowned naturalists, followed the tracks of wild animals closely. His superb works, the volumes of *Lives of Game Animals* clearly shows the great import he gave to tracks as a means of identification.

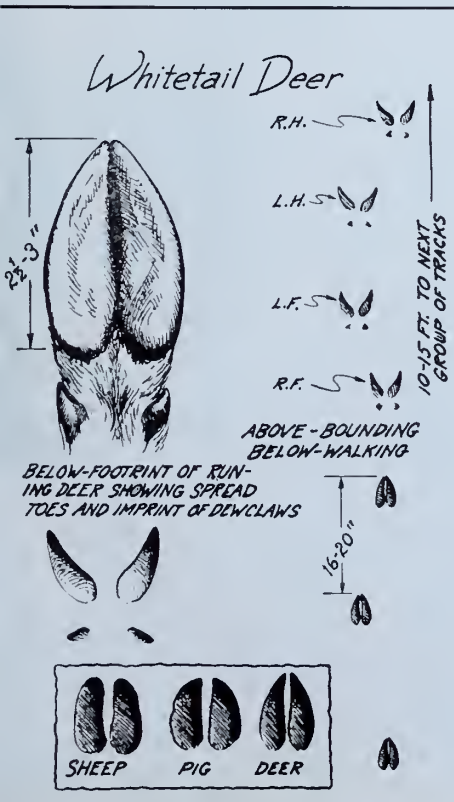
Trappers are past masters at track identification. Animal numbers, haunts, dens, general habits are learned rapidly from impressions in the mud or sand or snow and fur collectors profit quickly from the experience.

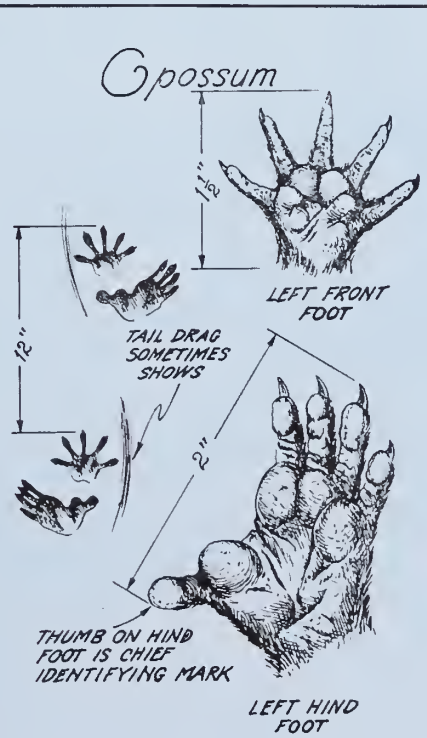
Whether you are a trapper, hunter, fisherman, or simply someone interested in the outdoors and its creatures, knowledge of animal tracks will add vastly to your storehouse of nature. Certainly fewer pursuits can compare in fascination to that of tracing of routes and habits of wildlife by means of tracks.

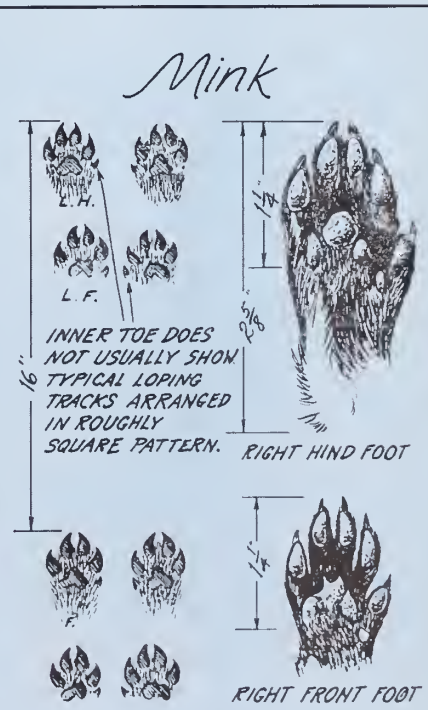
Most people associate snow with animal tracks for the reason that fresh snow reveals the dramatic story of animal life so quickly and obviously. Yet snow is not the best medium for study even though tracking is made so easy. The best medium for footprint study is soft mud or fresh, moist sand. Snow melts quickly and soon loses its depth and structure. Drifting flurries also obliterate animal tracks soon so that they are only vague impressions in the snow without outline. Mud holds shape well. So does fine wet sand. If you will look for your animal signs first in good media, you give yourself that much of an advantage.

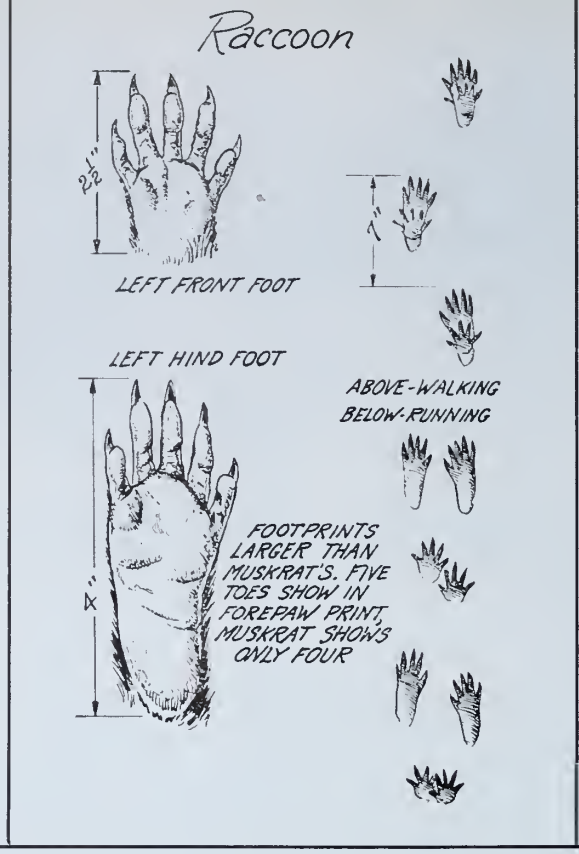
Now for some practical suggestions as to spots to look for wildlife tracks.

A mudbank stream is one of the richest and most rewarding places to look for animal signs. Here the mink makes his nightly haunts, the raccoon prowls after crayfish, the muskrat drags his tail after tubers, and waterfowl and shorebirds waddle at will. In our eastern marshes, the rare otter puts in an occasional appearance, and in the more wooded areas, particularly the mountains, the busy beaver shows his workings. All leave distinctive signs, tracks that are very easily identified.









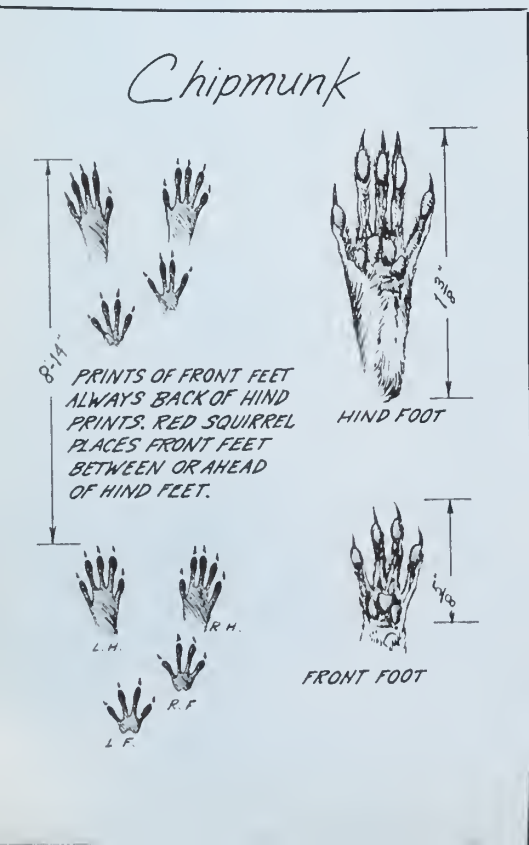
After a rain a good place to look for animal tracks is around sand bars, washed sandy places from fields, ditches, gully washes. Here you may find most any kind of tracks from white-tailed deer to opossum.

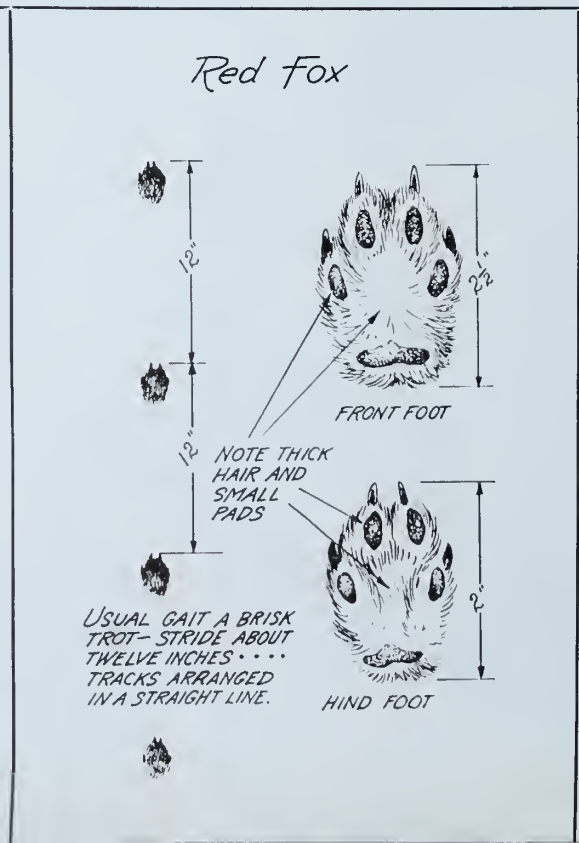
Although not the best medium for footprint reproduction, fresh earth does furnish a good place for some forms of animal track study. The heavier mammals such as deer and bear leave fairly clear signs in freshly prepared fields and these should not be passed up for study.

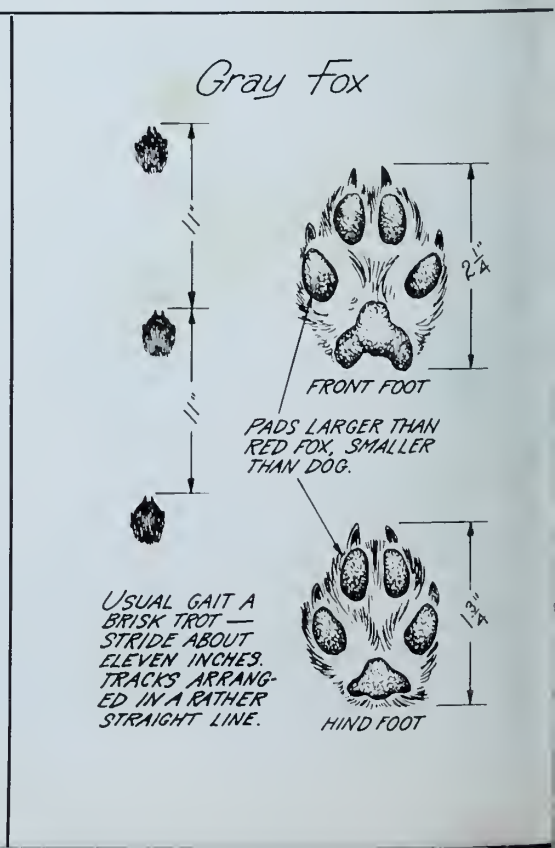
A soft carpet of fresh snow offers a fine picture medium for animal study. The advantage here is that animals can be tracked for distances and their various habits and moods can easily be noted. Best results are obtained from new fallen snow before melting or drifting has begun. The age-old pastime of tracing the routes of animals in the snow is as enriching an outdoor pursuit as any found in nature and those who have not taken part in it are certainly missing a great deal of fun. This too is one of the best ways to instruct children in the ways of wildfolk in the open.

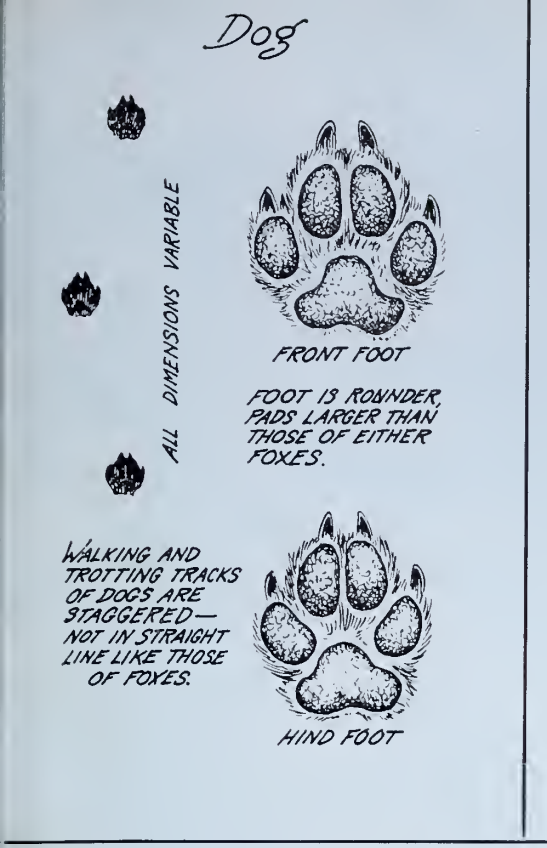
The following common Virginia mammals have certain characteristics that set them apart. Measurements are in inches, with width given first, length second.

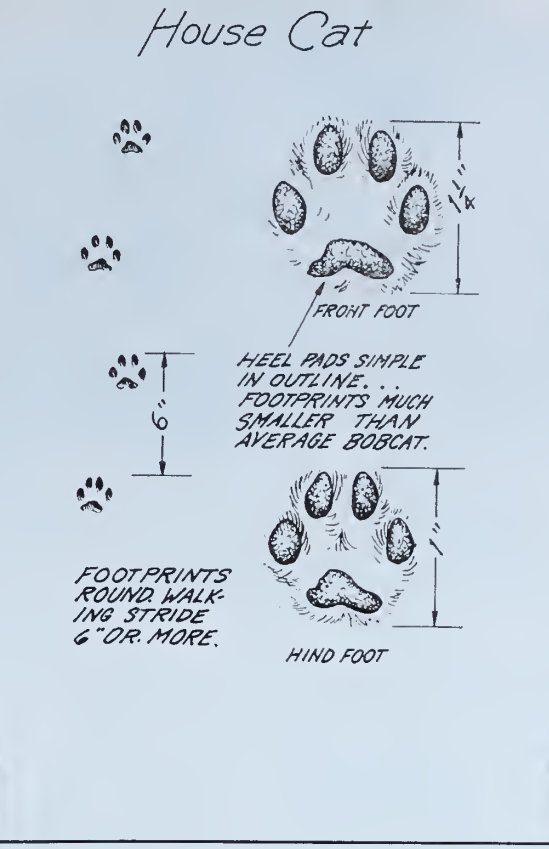
DEER: Easily identifiable by two-parted hoof marks, roughly 2"-2½" x 2¾" in size. Contrary to general belief, hoof prints of both sexes are indistinguishable when of the same size. Deer tracks are sharper pointed than those of domestic hoofed animals.

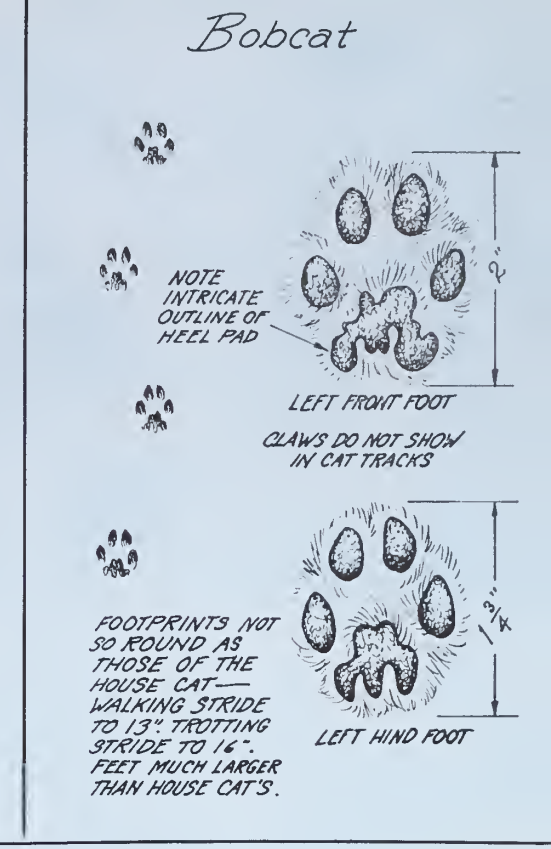












OPOSSUM: Front foot 1¾″ x 1½″, with five toes and claw marks. Hind foot is 1½″ x 2½″ with four toes and "opposing thumb." The 'possum track is easy to recognize with its fan-shaped widely-separated toes and tail mark.

MINK: Although the mink has five toes on each foot, only four show and the claws leave little if any impression. The trail of a bounding mink is made up of sets of four prints very close together. Front foot 1½″ x 1½″, paired. Hind foot, 1½″ x 1½″, four-toed, paired.

BLACK BEAR: The bears walks on the entire foot as does man and the track resembles human footprints. Both front and hind feet show the mark of five claws. The front foot measures 3″ x 4″ and the hind foot, 4″ x 7″ plus.

RACCOON: Front foot 2½″ x 3″, five thin fingers. Hind foot 2½″ x 4″, five thin toes; 7″ stride. Leap, up to 20″. Track is often compared to a baby's footprint. The woodchuck track, with which it is sometimes confused, is blunter and rounder than that of the raccoon.

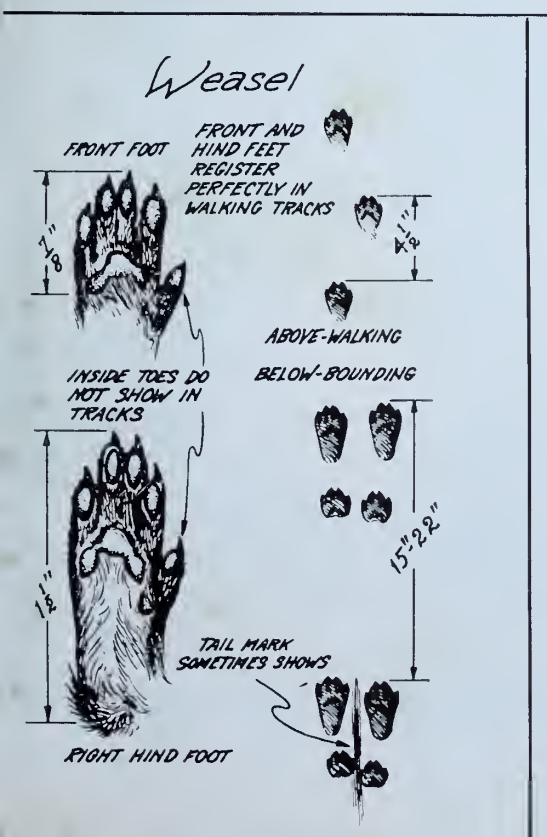
COTTONTAIL RABBIT: The two long marks of the hind feet, placed well ahead of the rounded prints left by the front paws, are the unmistakable sign of the cottontail. Front foot, 1″ x 1″, paired or not. Hind foot 1¾″ x 3½″, paired. Spread to 5″ and leap, to 7′.

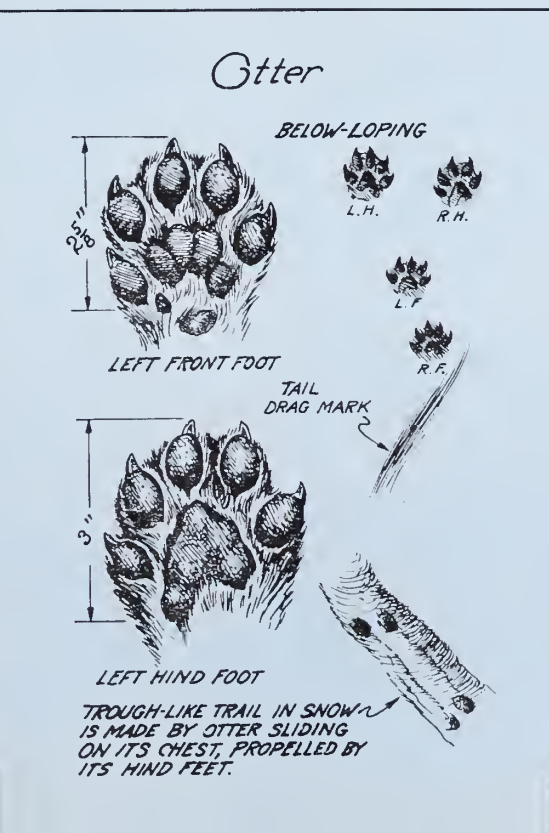
CHIPMUNK: Front foot, ½″ x ⅜″, five-toed, not together. Hind foot ¾″ x 1¼″, five-toed, paired. Spread to 2″. Common around stumps and stone walls.

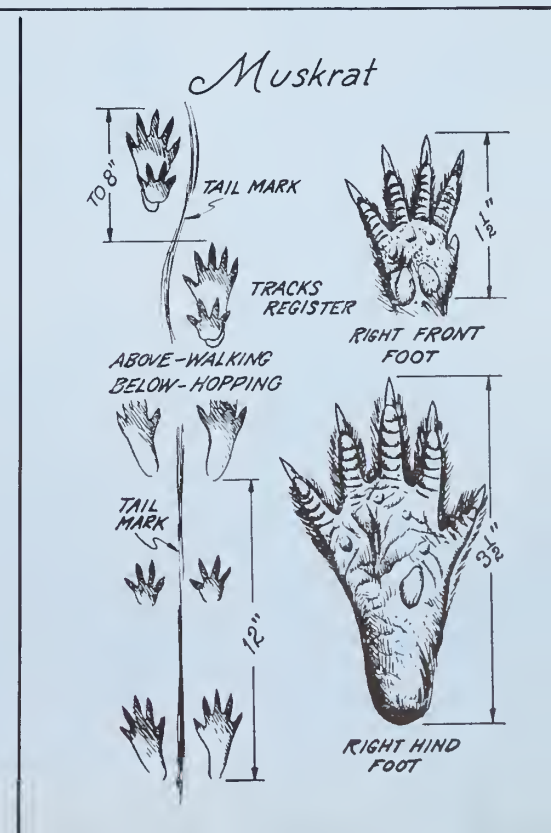
RED FOX: The "string-straight" character of the fox's trail makes it easy to distinguish from that of a small dog, which it otherwise resembles. Front foot is 1½″ x 2″ and four-clawed. Toe marks are elongated, narrow, rough. Hind foot is 1¼″ to 2½″, four-clawed. The stride is from 8 to 18 inches in a straight line.

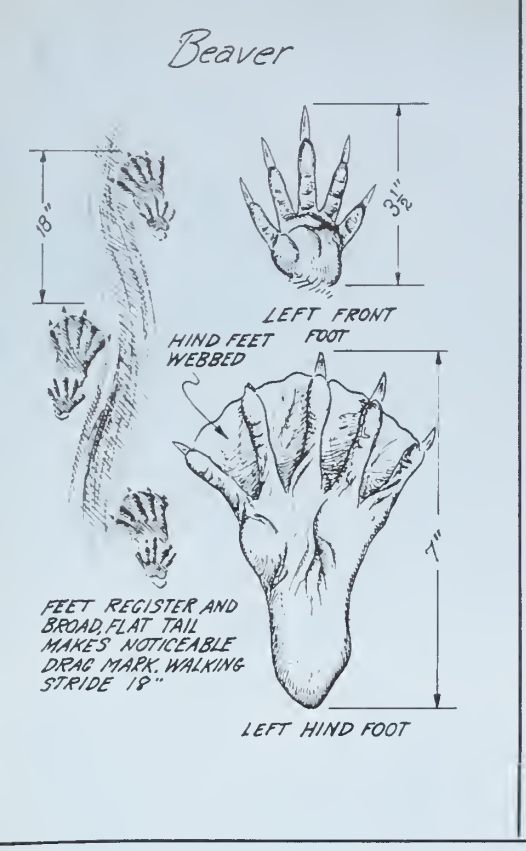
GRAY FOX: Front foot 1½″ x 2″, four clawed. Hind foot, 1¼″ x 1¾″, four-clawed, alternates. Toe marks rounded like that of dog, as contrasted to narrower toe marks of red fox. Stride from 6 to 16 inches.

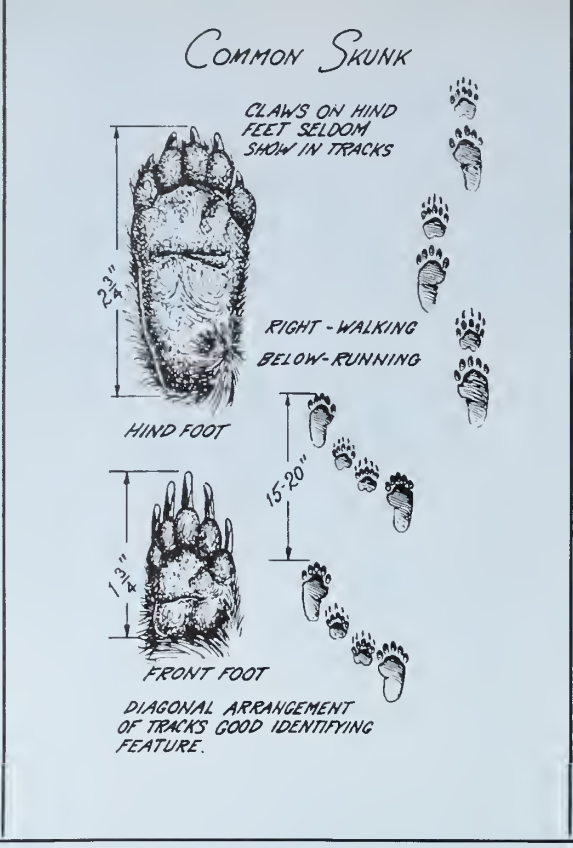
DOG: (Fox Hound) Front foot, 2″ x 2½″, four-clawed. Hind foot, 2½″ x 2¾″, four-clawed, alternates. The pattern of tracks is irregularly arranged.

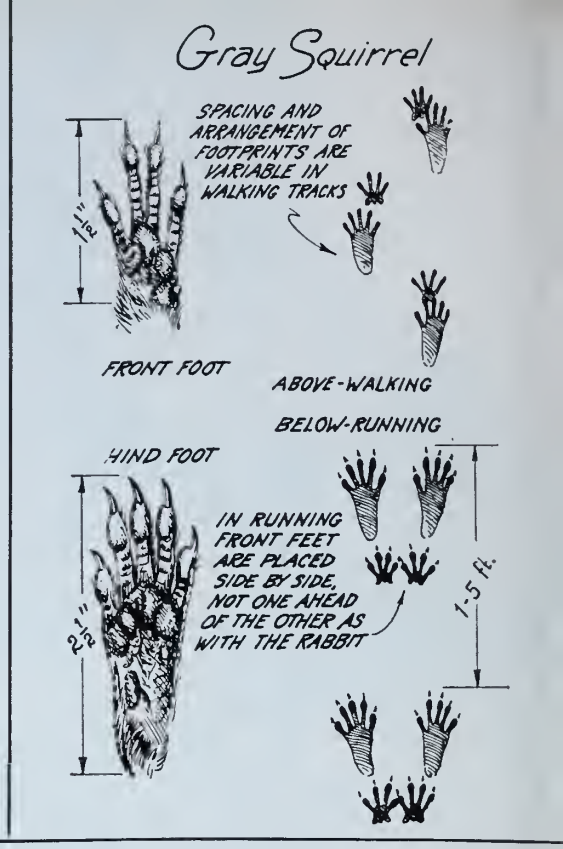












HOUSE CAT: Front foot 1¼″ x 1″, four-toed, alternates. Hind foot, 1″ x 1″, four-toed, alternate. 6″ stride. Track similar to bobcat except much smaller in size and almost never found in remote woodlands.

BOBCAT: Front foot, 1½″ x 2″, four-toed, alternate. Hind foot, 1¼″ x 1½″, four-toed. Stride to 14″. Found in deep forest area, never close to civilization.

WEASEL: Front foot, 1″ x 1″, four-toed, paired. Hind foot, ½″ x 1½″, four padded toes. Tracks overlap. Tail drags.

OTTER: Front foot, 2½″ x 3½″, five padded toes. Hind foot, 3″ x 3″, hair padded, paired. An otter's feet leave round tracks with distinct toe marks, almost in a straight line with a tail mark that undulates from side to side so that it is usually to the left and then to the right of three paw marks. It is too short-legged to move easily on land.

MUSKRAT: Front foot, 1½″ x 1¼″, four-toed. Hind foot, 3½″ x 1½″, five-toed. Three-inch spread and eight-inch stride. Its dragging tail leaves a slender line and the print of the forefoot is characterized by widespread toes, similar to but smaller than a 'possum's.

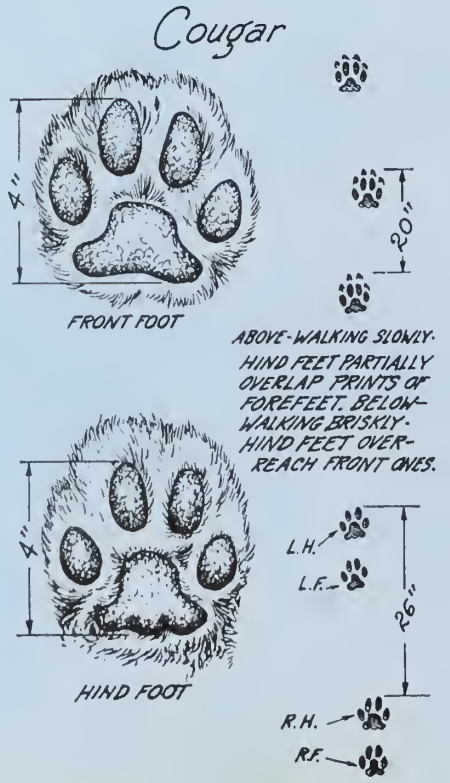
BEAVER: Front foot, 2½″ x 3½″, five-toed. Hind foot, 5½″ x 7″, five webbed toes. 16″ stride. Toes in. The flat scaly tail drags and this broad mark plus the wide webbed feet of this water-dweller make his track unmistakable.

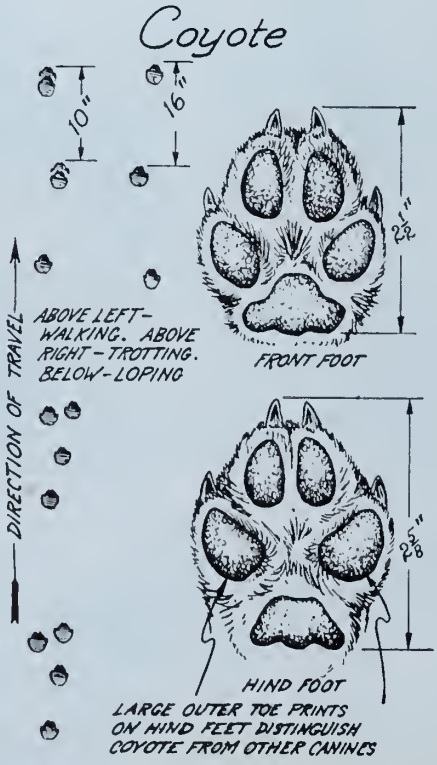
COMMON SKUNK: Front foot, 1¼″ x 1½″, five-toed, claws showing. Hind foot shaped like baby's foot, 1¼″ x 2½″, five toes, no claws showing. Distance between tracks while walking is 3″.

GRAY SQUIRREL: Front foot 1″ x 1½″, five-toed, paired. Hind foot, 1¼″ x 2½″, five-toed, paired. 3¾″ spread. Leaps to five feet. The squirrel leaves clearly marked nail prints in his tracks. Being a tree-climber, he places his front feet side by side when he hops or jumps. A tree-dweller, he seldom strays far and his trail will be frequently interrupted as the animal leaves the ground to take to the trees.

COUGAR: Front and hind foot 4″ long, with 20″ between tracks. No claws showing. Largest of wild felines.

COYOTE: Front foot 1¾″ x 2½″, four-toed. Hind foot, 2″ x 2⅝″, four-toed, claws showing. Large outer toe prints on hind feet distinguish coyote from other canines.





Getting The Most From Your Gun - By WILLIAM N. DUNBAR

IT CERTAINLY is discouraging to spend a week's pay or more for a scatter gun and then not have it produce the desired results. Hunters, on the average, must be contented with one gun and a limited amount of time to use and enjoy it, so of course they want to get maximum efficiency with a minimum of expense.

You and your gun are a team and you can't expect winning results if you neglect your part. First of all, a gun must be in good condition. Rust, grit and any other foreign matter on a gun's moving parts are not only unsafe, but detrimental to the functioning and life of the gun. Be sure there are no obstructions in the bore such as grease or an accumulation of lead from previous shooting. This can be removed with a wire brush and a little elbow grease. I have known barrels to burst from lead and rust deposits, causing severe injury to the shooter. A gun with an obstructed bore will not give a very efficient pattern, since shot striking these high places in the bore are deformed and upon leaving the muzzle stray off from the rest of the load.

(Commission photo by Kesteloo)

Don't squirt too much oil into the lock work, for this defeats its own purpose. A very small amount on the moving parts for lubrication is sufficient. Otherwise, those of you who wear glasses will have some specs all oiled up when the gun is fired and the excess oil seeks a home. Too much oil will also run down and be soaked up by the stock, weakening it in time.

Now that you have a clean gun, check all the screws for tightness and be sure to get a screw driver that fits. Nothing looks worse on a good gun than chewed-up screw heads. Bring all the screws up snug; don't try to wring them off. On some double guns the firing pin retainer screws should not be fully tightened, so check the firing pins for freedom of movement as you tighten the screws. If the firing pins bind, don't tighten them any further.

When one does not write for a long time, his hand shows lack of practice. The same thing applies to gunning, so if you devote 10 minutes a day to your gun, with the determination to make less misses and a higher percentage of hits this season, you will have accomplished something. Here is the procedure. First, make sure the gun is unloaded. Then, standing on one side or in the center of the room, if indoors, pick out several objects close at hand, preferably small ones, and practice bringing the gun to your shoulder and swinging your gun from one to the other as if shooting. Take the gun from your shoulder and go through the motions of aiming several times a day until several objects at different angles from you have been covered. It is not necessary to snap the gun each time, but do put an even pressure on the trigger and learn to squeeze it without jerking. Also, try not to flinch. In other words, follow through each time as though you were actually shooting at game. This is called dry shooting and is done by most of the top-notch shooters of the world. The dry shooting will familiarize you with the feel of the gun, also determine whether the stock is too long or too short, but before altering it, remember that your thicker hunting clothes will add to its length. This dry shooting will develop your gun-pointing skill to perfection, but you must stick to it to get results.

Up to now, we have incurred no expense, but there is another deciding factor we must know about and that is how does the gun shoot? You must shoot to get the answer to this. Get some wrapping paper one yard square or a piece of unfolded newspaper. Hang this up in a safe place at ranges of from 15 to 35 yards and shoot your gun, using a piece of paper for each shot. Shoot various loadings and makes of shells to determine which patterns best in your gun. Don't shoot just one shell and take this for an answer. Five of each should be a minimum. One factory states that results obtained by firing 100 shells are not conclusive. These pattern tests will amaze you by the differences obtained by various shells. I have one gun that patterns excellently with one brand of shell, but not with other brands. There is no best brand of shells. One has to determine which patterns best in his own particular gun and stick to that load for best results.

If you know what your gun will do and won't do, and what you can do with it, your game bag will not be lacking because you under-shot, over-shot, or flinched. So clean up the gun, pattern test it, and then learn how you can hold and point it best.

A Look at

Southwest Virginia's Deer Herd

By CHARLES H. PEERY
Game Biologist

(Commission photos by C. H. Peery)

An 18-month old southwest Virginia 5-point buck.

HAVE you ever stopped to wonder where the deer came from that you killed back in 1947? You may have killed it in Bland, perhaps Smyth, or even in Scott County. But where did that deer's ancestors originally come from? Remember back in the late twenties? The old timers can tell you that there were few, if any, deer in many parts of southwest Virginia in those days.

There is no pretense that this report covers all of southwest Virginia, for it is a vast territory. This is primarily concerned with that portion of Virginia which begins with Bland, Wythe and Grayson counties and extends west to the borders of North Carolina, Tennessee, Kentucky and West Virginia.

The eastern portion of the state can boast of having descendants of the original Virginia white-tailed deer. However, southwest Virginia has had to import most of the deer which make up the present deer herds. If you could place an eastern deer and a southwest deer side by side for close comparison, you would see differences in color, general body dimensions and body weight. For the most part, deer in the southwest are descendants of deer from Pennsylvania, Michigan and Wisconsin which were purchased from those states for restocking. Knowing that many readers live in counties included in the southwest, it may be of interest to know when deer were stocked in a particular county, where they were stocked and how many were liberated. Taking the counties in alphabetical order, we find that Bland County received 22 deer back in 1931 and 1932. All of these deer were released on Round Mountain. Buchanan County received a total of 37 deer which were liberated on Dismal River, Looney Creek and Big Fox Creek beginning back in 1939 and ending with the last load in 1950. Dickenson County received 45 deer for restocking and practically all have been released on the Breaks Game Management Unit in the northern part of the county. These liberations have been scattered out from 1941 to 1952. According to the records, Grayson County received only 16 deer, which were released in the Spring Valley section back in 1938. A total of 14 deer was released on Clinch Mountain in Russell County in 1932 and 1938. Scott County received 25 deer on Powell Mountain in 1931. Smyth County now has the largest number of deer killed annually in this region. A total of 119 deer has been stocked in Smyth County with 103 of them having been released on the Hurricane Game Management Unit. Others were liberated in Hungry Mother State Park and the Skull's Gap section.

All of the Smyth County liberations were made from 1938 to 1943. Tazewell County received a total of 38 deer in 1930 and 1942. Most of these were placed in the Poor Valley section. Washington County received 28 deer, which were widely scattered throughout the county back in 1930 and 1938. Wise County received all of 133 deer, which were liberated in the Glades Game Management Unit from 1931 to 1941. The Glades Game Management Unit runs into Scott County, and it may be considered that both counties benefited from the liberations. Wythe County tops the list with the highest number of deer stocked in any single county. A total of 161 deer has been released with 109 of these going to the Comers Rock Game Management Unit, and 52 going to the Gullion Fork section during 1939 to 1943.

As a summary of the restocking in southwest Virginia, a total of 638 deer were released. From the early thirties on through to the present time, your Commission of Game and Inland Fisheries, in cooperation with individuals, sportsmen's groups and the U. S. Forest Service has restored deer hunting to most of the south-

western counties of the state. In this region covering 12 counties, as outlined in the beginning, only Dickenson and Buchanan counties remain unopen to deer hunting. If these counties follow the success of their neighbors, then they too should look forward to deer hunting within the next few years.

Deer hunting is just now getting down to being an annual affair in the southwest portion of Virginia. Since the first counties were opened up to deer hunting in 1945, the 1953 season will mark the ninth year of this treasured sport for the residents of the southwest. Some counties did not open their deer season until 1946, Lee County opened in 1949, and the newest member to join the open list is Russell County, which made deer hunting legal in 1952. For five years after deer hunting was allowed in southwest Virginia, the length of season was two days. In 1950 the season was three days, four days in 1951, and six days in 1952 and 1953.

Here are some interesting facts about the deer that have been bagged since 1945. This information was taken from the Big Game Tag, which is required to be attached to deer, elk, bear and wild turkey. The year 1945 brought a new experience to many sportsmen of the southwest, with the first two-day deer season open in six counties. A total of 170 legal deer was taken during those two days. Being the first open season you would naturally expect to bag some of the older deer that had been maturing during the previous years the season had been closed. It was in this year that the average deer antlers taken for trophies had 7.5 points, and at the same time, 59 per cent of the deer killed had 8 points or more. During the years 1946 through 1951 the number of deer legally killed each year gradually increased. The average number of points per antler dropped only slightly with an average of 7.0 points per rack in 1946 ranging to an average of 6.5 points per rack in 1951. During this same period, the number of deer killed having 8 or more points per rack, ranged from 50 per cent down to 38 per cent of the total kill each year. Then came the 1952 season with a change in the so-called buck law. Prior to that year, a legal deer was one having three or more points. In 1952, any deer with visible antlers was legal game. This change bettered the chances for a hunter to bag a buck, and if antlers were visible, that deer was legal game. The three-point law was primarily established in the beginning as a safety factor, with the hopes that hunters would take a good look before they shot. The old rumor that a deer's age can be determined by the number of points on the antlers is entirely false. I personally have seen deer that were known to be 18 months old that had five points on their antlers. I have been told that the record for an 18-months old buck is 12 points. In case you might be wondering whether deer shed their antlers each year, they do! In rare instances, doe deer have been reported with antlers.

A 14 point buck killed in Blond County, where not too long ago a deer could not be found.

In 1952, alone, there was a total kill of 808 legal buck deer. It is natural to expect, with the change in the buck law in 1952, to take a larger number of deer with small racks. Actually, the average deer taken in 1952 had 4.9 points, and 22 per cent of the 808 bucks killed had more than 7 points. There is nothing to be alarmed about when you review these figures. Such was expected, and although these figures do not reveal it, there were still many of the older and larger deer taken. In these southwestern counties, a total of 3892 legal deer have been killed since deer hunting was permitted in 1945. This total kill is over six times the number of deer that have been stocked in these same counties.

Southwest Virginia's deer herds are continuing to grow from year to year. Sportsmen are becoming more trophy conscious, less trigger happy, and are waiting for the big one to come along. With favorable hunting weather in 1953, the number of points a buck should average is at least five. The total kill will probably run between 800 and 1000.

Southwest Virginia is fortunate in having suitable and ample deer range at the present. This range, which now provides the proper quality and quantity of deer foods, could change rapidly for the worse if Virginia had too many deer. Such a condition hardly seems possible to the casual observer, but it can happen, and has happened in many other states. The aim and purpose of your Commission of Game and Inland Fisheries is to keep the supply of game as well as the supply of game food in proper balance, with the end result of betting hunting for Virginia sportsmen.

WILDLIFE ON CROPLANDS

Most wildlife comes from land that is used for cultivated crops, livestock and wood products.

By EDWARD H. GRAHAM*

When conservation practices are applied to the land the habitat is improved for birds and animals.

SOME wild vertebrate animals are considered harmful, a great many seem to have no economic value, and a number are considered useful because of sport, their fur, or other values. Wildlife also has important aesthetic and ecologic values, but such values in practical agricultural programs are usually given little weight.

Along with cultivated crops, domesticated animals, grass, and trees, wild animals are a basic biological resource. Wildlife cannot rightly be separated from "land resources" as it has been separated in the agenda of this Conference. Wildlife is as much a product of the land as any other living resource.

The management of wildlife is different from that of all other living resources in some fundamental aspects. Wildlife in the United States is not owned by the person on whose land it occurs. As an inheritance of English law, American wildlife belongs to the State, not as proprietor but in its sovereign capacity for the benefit of all the people. Therefore, while a man may sell his cultivated crops, domesticated animals, livestock, trees and other land products, he cannot sell the wildlife which his land produces. He can, however, sell hunting privileges to those who have obtained a hunting license from the State. He may also, under State law, sell furs which he obtains from animals he has trapped on his own or other lands.

Wildlife also differs from many other living resources in that, for the most part, it is a by-product of lands which are used primarily for the production of other crops. Although some land in the United States is devoted exclusively to the production of wildlife, such as public refuges and extensive marshes, most wildlife comes from land that is used for cultivated crops, livestock, and wood products.

Because of the nature and ownership status of wildlife, operations on private cropland intended to increase the production of wild animals are most likely to succeed if they have land-use values in addition to their wildlife

* Note.—The author, now assistant chief of the Soil Conservation Service, wrote this article when he was chief of the biology division. It is taken from the Proceedings of the United Nations Scientific Conference on the Utilization of Resources, held in 1949 at Lake Success, New York.

values. The things that are being done for wildlife benefit on cropland in the United States can be separated into two groups. First are operations on land that has as its chief value the production of wild animals. Secondly, there are land-use operations that produce wildlife on land used also for other purposes.

It has been estimated by the Soil Conservation Service that there are approximately 100 million acres of land in the United States that are not adapted to the production of cultivated crops, livestock or trees, the most suitable use of which is wildlife production. Approximately one-third of this acreage is on farm land. One type of land suited best to wildlife is the marsh which it is not physically desirable or economically feasible to drain. Both coastal salt-water marshes and inland fresh-water marshes have been given special attention for the production of fur-bearers, especially muskrat, and for migratory water-fowl. The specific things done to marshland for such purposes are: fencing, to control cattle grazing; ditching, chiefly to provide wildlife travel lanes; control of water-levels to manipulate vegetation; controlled burning to manage vegetation; and seeding and planting of desired plant species.

Other agricultural lands that can be devoted exclusively to wildlife are odd areas. These are usually small, such as inaccessible corners of cultivated fields, gullies, rough and rocky sites, highly eroded spots. Odd areas are managed for wildlife production by protecting them from fire and grazing. They are frequently planted to trees and shrubs that provide wildlife food and cover. Although individually small, the total acreage of odd areas is very large—amounting perhaps to something like 10 million acres in the United States.

In addition to the development of lands such as marshes and odd areas that are best used when they are managed exclusively for wildlife, there is a group of practices that produce wildlife as a by-product of cultivated crop production. One such practice is the field border planting. In many regions the margin of a crop field, where it adjoins woodland, produces little or no growth of crop plants and frequently erodes into an unsightly and unproductive area. Because of the shade and root competition of the adjacent trees and the infertile nature of the soil, most plants make poor growth on field margins. After considerable trial the Soil Conservation Service found that two perennial legumes would grow well under such conditions. These two plant species are now used a great deal in revegetating crop field borders. The larger shrubby species, *Lespedeza Bicolor*, is planted next to the trees in a band 15 or 20 feet wide. Beside the bicolor on the field side of the border the smaller wand-like *Lespedeza sericea* is planted in a band of comparable width. Sericea serves as a turn-row for team and tractor and for wildlife cover. The seed of bicolor provides A-1 bobwhite quail food and the flowers are an important source of nectar for honey-bees. Millions of bicolor plants and thousands of pounds of seed of bicolor and sericea lespedezas are

Farmers and landowners, receiving technical assistance from the Soil Conservation Service alone, during the past 15 years, have constructed more than 125,000 ponds.

produced for field-border plantings in the United States each year.

The hedge is a land-use practice on cropland that is becoming more and more popular in the eastern United States, and to some extent in the humid West. The plant most used is multiflora rose (*rosa multiflora*), which grows to a height of 8 or 10 feet and a width of 10 or 12 feet. It is not big enough to shade crops or to provide root competition and it does not spread into adjacent land that is in use. Multiflora rose hedges were first used in conservation operations as contour guide lines and as barriers against erosion and swift runoff of water on steep slopes. The stems of the plant are stiff and very thorny, and it is now being used as a living fence because it will turn livestock if plants are set a foot apart in the row. Multiflora rose fences are used to separate crop fields from pasture, and to protect gullies and other odd areas from grazing cattle. The hedges provide excellent wildlife cover and contribute to a permanent land pattern of value to wildlife. The present demand for multiflora rose far exceeds the supply available from both public and private nurseries.

The revegetation of streambanks is receiving increased attention by both soil conservationists and wildlife managers. Stabilization of streambanks not only protects cropland through which the stream runs, usually very productive bottom land, but it also produces excellent wildlife cover of desirable pattern in terms of strips of vegetation across crop fields. Since the most desirable plant species for streambank stabilization have proven to be shrubs or plants of shrub-like form, their cover value is considerable. Protection or eroding streambanks also improves the stream for fish and other aquatic life by reducing sedimentation. Streambank stabilization, combined with the soil conservation program necessary on the watershed to supplement and make secure the work on the streambank itself, is one of the major contributions to improvement of stream habitat. In the United States such work has proved that it can convert muddy streams to a good condition suitable for trout.

Throughout the central United States windbreak plantings of trees and shrubs have been used a great deal especially to protect farmsteads and crop fields from damaging winds. Considerable attention has been given to the selection of trees and shrubs in windbreaks for their wildlife value, because such woody plantings in otherwise treeless areas can be of great importance to wild creatures. Frequently a row of conifers is included in a windbreak to provide winter shelter for wildlife. The margins of windbreaks are planted to shrubs that produce fruits and seeds that provide food for wild birds and mammals. The establishment of some 7,000 miles of field windbreaks contributes much to the improvement of cropland for wildlife.

A land-use device on cropland of value to both fish and other wildlife is the farm pond. Farmers and ranchers, receiving technical assistance from the Soil Conservation Service alone, during the past 15 years have constructed more than 125,000 ponds. These ponds are built on selected sites with a design that renders them a permanent part of the farm setup. They are frequently used to provide water for livestock, for irrigating small gardens, spraying orchards, or some other agricultural purpose. Nearly half of them, however, have been carefully stocked with the correct number of large-mouth black bass and bluegill sunfish ("bream") to permit their management as fishponds. Many of these ponds are fertilized with commercial fertilizer and are producing about 200 pounds of palatable fish per surface acre per year. A great many of the ponds that have been constructed are fenced, protecting them from livestock. The area within the fence is often planted to trees and shrubs which help to make the pond and the fenced area around it a particularly valuable small refuge for fur bearers, water-fowl, and game species, as well as fish.

The management of marshes, odd areas, ponds, and streambanks, and the establishment of windbreaks, hedges, and field borders on land used primarily for the production of cultivated crops can make cropland excellent wildlife habitat. Such practices are applied to the land first because they are good for the land itself and therefore of value to those who operate the land. Because of this they are the most permanent and important things that can be done to agricultural land to make it productive of wildlife.

Many other things can be done to improve cropland for wildlife. Unless such measures can be assured a permanent place in the agricultural scheme of things, however, they cannot be depended upon for long to produce the wildlife that agricultural land can make possible. Since more than half of the land acreage of the United States is in farms and ranches and since something like 80 per cent of the hunting and much of the fishing is done on agricultural lands, it is evident that in the United States we must depend upon such lands for much of the useful wildlife we are to produce. We believe that the things that have been done through soil and water conservation work in the United States have pointed the way toward the most permanent and productive use of cropland for wildlife. The practices described are being applied. They are producing wildlife in America. As we husband our land more and more carefully in the future wildlife will take an important place along with the other crops that the land produces.

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Take A Boy Hunting This Year

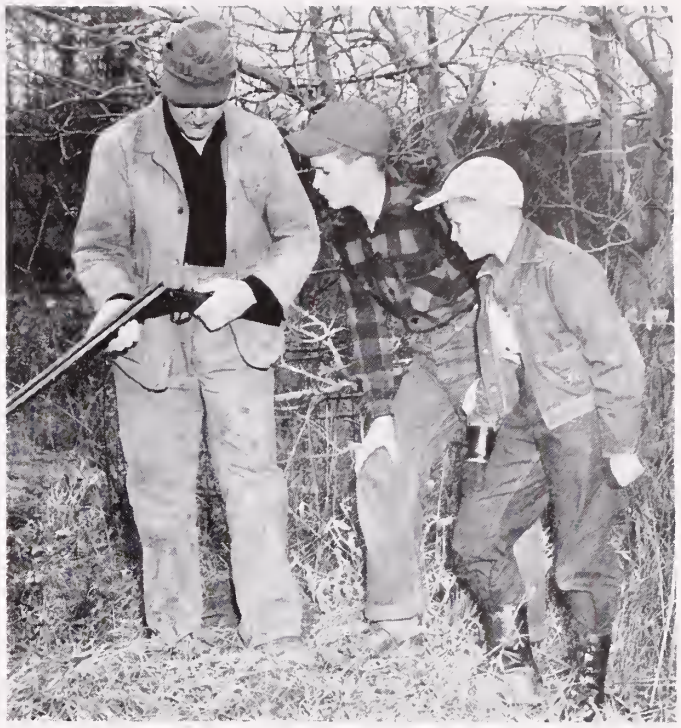
(Commission photo by Kesteloo)

THE soft caress has gone from the southern breeze. There's a tang of fall in the air. Morning mists drift lazily in the valleys and woodsmoke hangs heavy on the hillsides. Another hunting season is just in the offing.

"Hunting is the oldest of all sports," says Henry P. Davis, public relations manager, Remington Arms Company, Inc. "Long before the practice became a sport, man was forced to hunt for his very existence. For centuries the sport has had a strong appeal to men, women, youngsters . . . rich and poor alike. Every section of this country, even though comparatively new, is steeped in the traditions of the chase. And despite the fact that game supplies are no longer as plentiful as in former years, the thrill of the hunt grows stronger, for the sportsman must exercise a greater amount of skill than ever before if he is to reap a sporting share of the annual wildlife harvest.

"If you want to get the most pleasure out of your hunting this season, *TAKE A BOY HUNTING AT LEAST ONE DAY!* Oh yes, his bombardment of seemingly foolish questions may bore you at first, his awkward efforts to negotiate heavy cover quietly will probably irritate you, and you'll likely want to commit mayhem the first time he yields to the temptation to raise his head for 'only a little look' just at the moment the ducks have decided to pay your decoys a visit . . . yes, there'll be those moments. But when you see the look in that lad's eyes as he retrieves his first duck, or watch the glow of proud accomplishment spread over him as he fondles his first quail, you'll experience a thrill I'll guarantee you will never forget. No, siree, mister, you can't forget it . . . for you will have been eye-witness to the BIRTH OF A MAN!

"Maybe that youngster is your own son. Or he may be your nephew, a cousin, or the son of a friend or neighbor. Makes no difference whether he is old enough to handle a gun or not, take him along anyway for NOW is the time to get him started right. NOW is the time to show WHY safety precautions should always be taken, WHY certain things should be done and certain others should NOT be done. Show him WHY, when two hunters are walking abreast, they should keep their gun barrels pointing AWAY from each other . . . WHY, when they're walking in a single file, the business ends of their firearms should still always be kept pointing AWAY from each other. Show him WHY a hunter should never climb a fence with a loaded gun in his hand, HOW easy and safe it is for one companion to hand over both guns after the other has crossed the fence, how easy and important, too, it is to keep the gun safety ON, WHY when two men pass each other in a boat one should remain still until the other is safely seated in the new position.



Youngsters should be taught gun safety.

"Teach him these things and many others . . . little bits of woodscraft, little morsels of birdlore, simple things about game habits. Watch him absorb these things and realize their importance—and you'll have a front row seat in watching a BOY grow into a MAN.

"Take it easy with that boy," advises Davis. "Teach him those things which will help him 'make a safe sport safer' for himself and his companions. Yes, safer and more enjoyable. See that he is well and comfortably shod. Don't let him get blisters on his feet. Be sure that he keeps his feet dry. Advise him against carelessness about fire. Show him examples of the ravages of erosion and tell him how it could have been prevented. Teach him the niceties of field etiquette.

"Stop and rest with him occasionally. These periods afford good opportunities to answer questions and explain the many whys and wherefores. Demonstrate proper gun handling, show him the importance of leading the target, help him estimate distances. Don't try to impress him with your ability as a marksman or the heaviness of your game bag. Teach him the fun of 'taking some' but the importance of 'leaving more.'

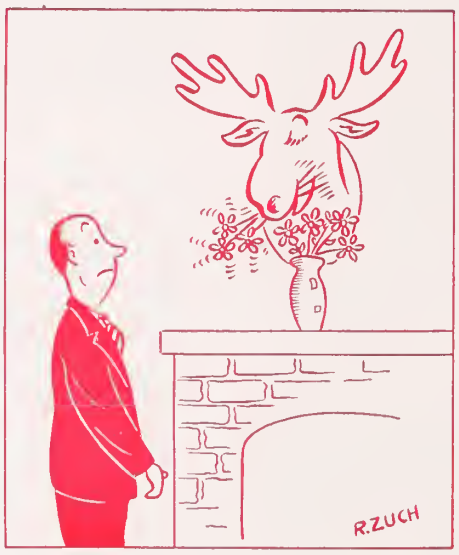
"Yes, sir, Brother," concludes Davis, "if you want to become a hero in the trusting eyes of a youngster, if you want to feel your chest muscles joyfully strain to the expansion of personal pride—"TAKE A BOY HUNTING THIS YEAR!"

CONSERVATION

(Continued from page 7)

The Farmers Home Administration has been particularly active on soil conservation in an area that has the greatest need and which is possibly the most often neglected, that of the tenant and low income farmer. The Production and Marketing Administration has made a substantial contribution, especially through its encouragement to farmers to carry out practices recommended by the Land-Grant College.

Much of the public legislation, however, has been of a regulatory nature, and much a combination of educational and regulatory. Under such legislation have been set up in Virginia and in several states a large number of agencies which have had a tremendous influence on conservation, such as State Department of Agriculture, game and fisheries commissions, departments of parks, forestry, water control, etc., conservation and development commissions or departments, health departments, and a host of others, all interested in some phase of conservation. The total contribution of such agencies would be hard to measure.



Of great importance in bringing about this change in attitude too has been the increasing interest on the part of farm people and urban people in conservation. Without such interest, the job would be infinitely harder. Farmers, bankers, merchants and other businessmen increasing numbers are getting solidly behind the idea of conservation. The net result of all this has been to increase the interest of the rank and file in conservation in all its phases and has added great momentum to the movement.

Yes, the attitude toward conservation has changed quickly. A good job is being done in Virginia. A better job needs to be done in educating the people. The job is a challenging one worthy of the wholehearted support of all groups and agencies, rural or urban. It is a job which demands vision and initiative. "Without vision the people perish" is particularly true as far as the conservation of the soil and other resources are concerned. Without adequate conservation, maintenance and use of the soil and other resources, Virginians, Americans or any people gradually sacrifice not only their resources but their standard of living, their schools, their churches, their souls. With adequate measures of conservation and maintenance and use of resources, a people, a state, a nation advance in those things which contribute to better living and to civilization as a whole. Virginia is in an exceedingly fine position to carry on. To do this, however, all must work together, and the rank and file must be shown the need for conservation.

Such educational work should in so far as possible reach all people. "We must take the public into our confidence." Such a task may be greater in the future in Virginia than it has been in the past, due to a changing population.

In spite of the increase in population in cities, people are also moving out of cities into rural areas in increasing numbers due to high rents or home costs, social environment, health and personal preferences.

This change has brought about both advantages and disadvantages. It is helping in some ways to break down the barrier between urban and rural people. These people have signified by action their desire to live in the rural area. On the other hand, in many ways, they are in but not a part of the rural community. They live in the country, but their interests often remain in the city, They present new problems along many lines, including conservation, health, law enforcement, and so forth. They offer a challenge to everyone interested in getting across the picture on conservation.

In the past, some of the best educational work on conservation has been on youth. In the future, this work with youth should pay even greater dividends. The number of young people in our population is increasing. They are becoming more and more responsive and responsible. Further effort needs to be expended with them both individually and in organizations. The thousands of youth in Boy Scouts, Future Farmers of America, Future Home Makers of America, 4-H clubs, and other organizations offer a fertile field for education where the seed sown may bring forth manyfold. The motto of the 4-H Club is "To Make the Best Better." Sixty thousand strong in Virginia, 2,000,000 in the nation, these girls and boys are tomorrow's citizens. What might not such an organization accomplish? Other youth organizations offer similar opportunities. Conservation will gain or lose ground largely as determined by these youth.

Conservation in its true sense is a big job, worthy of the efforts of all working together for a common purpose.

Nature is the most thrifty thing in the world; she never wastes anything; she undergoes change, but there's no annihilation, the essence remains—matter is eternal. —Binney.

Midyette Honored By Southeastern Game and Fish Commissioners

Webb Midyette, chief of the law enforcement division of the Commission, was elected first chairman of the newly-elected law enforcement section of the Southeastern Association of Game and Fish Commissioners during the seventh annual convention at Chattanooga, Tennessee.

During the conference Mr. Midyette presented a paper on "How to Create Better Working Relationships Between Conservation Officers and the Courts."

Exceptional Squirrel Hunting Luck

Game Warden J. G. John, of Montgomery County, has sent us an unusual story about the squirrel hunting season. When Floyd Smith, of Shawsville, was hunting on Shooting Creek in Floyd County he got a hunting bonus in addition to his share of squirrels, for he spotted a large male wildcat racing through the woods at daybreak and mowed him down with a load of number sixes. Normally it would take at least a number two shot to stop one of these tough cats, but sixes did the job for Smith when they connected just back of the shoulder.

Warden J. G. John stands with Floyd Smith and his trophy acquired on a squirrel hunting trip.

What the big cat was up to, prowling the woods in daylight, is still a question, but maybe he was after the same quarry as Smith, a tender young squirrel, till the hunter caught up with him. The cat measured four feet in length and tipped the scales at 40 pounds, no puny wildcat as the picture shows.

Game Birds Too Get Right-of-Way

J. D. DeJarnette of Bowling Green has sent us an encouraging report of a wildlife planting program on a right-of-way which crosses his land:

"The Virginia Electric Cooperative, of Bowling Green, has a right-of-way thirty feet wide and extending about one mile on some of my wooded land. Until the last few years they have at intervals cut out the undergrowth, which prevented making much use of the ground. However, after V.E.C. started spraying these areas, which in my opinion has been very effective, I put a heavy disc on the right-of-way last fall, and prepared a very good seed bed, without too much work involved. In the early spring I limed and fertilized the area. Through the efforts and kindness of our Mr. Roland H. Eager, game warden, some Kobe and bicolor and serecia lespedeza seed were obtained from your department. I purchased some Kobe and Korean lespedeza, mixed them all together, except the bicolor, and sowed the area, then along the wooded side of the right-of-way I sowed a narrow strip of bicolor."

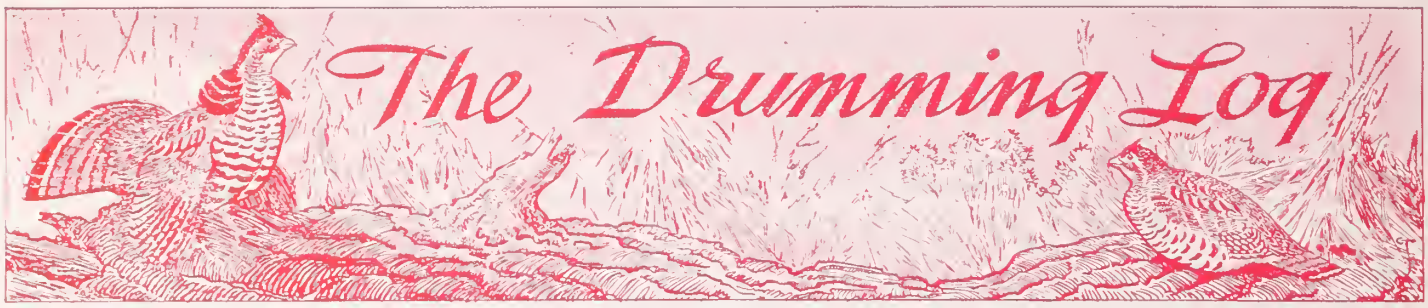
"Considering the dry season, I have, I think, a remarkable stand, and with little care each spring, cutting out a few shoots and probably one clipping (high) in the early summer, I should have a recurring crop of game food (particularly birds) for some years to come."

No Hunter's Prize

Some hunter will go without his trophy deer head this year, because free-running dogs beat him to the prize.

The enclosed picture of a nine-point buck was taken by Charles Peery, game technician from Tazewell, Virginia. The deer had broken its back when dogs ran it into a fence in southwest Virginia last fall.

A nine point buck that broke its back fleeing from dogs. (L. to R.) Game Manager C. R. Sparks, Conservation Officer E. S. Yeatts, and Game Manager Fred Roop.



GEORGE WASHINGTON NATIONAL FOREST CONTRIBUTES TO COUNTY FUNDS

Senator Willis A. Robertson of Virgina has announced that $43,929.34 has been deposited in the Virginia State Treasury to the credit of Alleghany, Amherst, Augusta, Bath, Frederick, Highland, Nelson, Page, Rockbridge, Rockingham, Shenandoah and Warren counties.

The money represents their share of the receipts collected by the George Washington National Forest for the products sold from and the commercial uses made of national forest land. The amount is 25 per cent of the total collections from the portion of the forest in Virginia and is the annual payment to the counties in which the federal forest land is located. It is based on a 1908 statute and is specifically designated for school and road expenditures.

There has been a steady rise of income during the years the forest has been under administration and Senator Robertson pointed out that this means that forests, under proper management, can be made to produce a stable crop of forest products on a sound financial basis. Total national forest receipts are far in excess of operating costs.

The part that properly managed woodlands play in stabilizing watersheds, in furnishing employment in woods work and manufacturing the final product, and in providing unlimited opportunities for hunting and fishing and healthful outdoor recreation can not be measured accurately.

"I can remember," Robertson said, "painfully well how vast areas of the Blue Ridge in the Valley looked when the U. S. Forest Service was organized by President Theodore Roosevelt, with Gifford Pinchot as the first head of the Service: annally vast areas were burned over, oftentimes set by huckleberry pickers interested only in the destruction of the timber so more huckleberries would grow. Counties received no tax revenue because those mountain acres were delinquent, and the recurring fires destroyed the timber value for the owners and the recreational value for everyone else."

NEW MARKET BOY RAISES QUAIL

With the help of a pet bantam, Dwight Neff of New Market successfully raised four quail until they were big enough to turn loose. His uncle,

Dwight Neff, of New Market, displays a few of his pen raised quail.

while mowing hay, accidentally mowed the head off a mother quail. There were nine eggs in her nest and Dwight immediately carried them to the barn and put them under a pet bantam hen. She hatched seven tiny quail.

Dwight fed and watered them until they were four weeks old. He lost three, but raised four until they were old enough to turn loose.

FOUR SCHOLARSHIPS ANNOUNCED

The National Wildlife Federation has announced it will grant four gradnate "Ding Darling" fellowship in conservation education of $1,000 each, and one James Hopkins undergraduate scholarship of $500 for the school year 1954-55.

The Ding Darling fellowships, financed largely by the sale of wildlife stamps, are named in honor of the famous cartoonist and conservation leader who organized the Federation in 1936 and served as its first president. The undergradnate scholarship is made possible by the income from a bequest by the late James Hopkins of New York.

Students wishing to apply for one of these grants may secure a form by writing to the Federation at 232 Carroll Street, N. W., Washington 12, D. C. Deadline for applications is Dec. 31, 1953.

The fellowships are designed to support research studies in the field of conservation education, according to Dr. E. Laurence Palmer, retired professor of rural education and nature study at Cornell and now director of education for the Federation. Appropriate subjects, he said, would be such fields as teacher training, radio and television, urban conservation education, scouting and conservation, curricular problems, state problems, sportsmen-farmer recreation cannot be measured accurately.

National Wildlife Federation fellowship grants are currently supporting studies at Yale University, Cornell University, University of Oklahoma at Norman, Iowa State Teachers College at Cedar Falls, and Long Beach State College of California.

SAVE THAT VENISON!

Tons of venison and other wild meat are lost each year because of improper care. After killing a deer or other big game, if you'll follow the suggestions of experienced hunt-

ers, you won't have to worry about your meat not staying in first-rate condition.

Hog-dress the animal immediately. Hang carcass in a cool, dry place by the head. Prop open the body cavity with sticks for better airing. Wipe the inside of the body cavity with dry cloths or clean grass. Don't use water except for removing intestinal contents that may be on meat. A cheesecloth bag big enough to hold the deer is very advisable to keep out flies and other insects. Keep the carcass as cool as possible. If it should freeze, try to keep it frozen since alternate thawing and freezing destroy venison flavor. Don't haul the deer on the outside of your car where the meat is exposed to the sun. Fender hauling may be fine for the ego, but it's hard on the meat. After you get it home, place it in cold storage and allow it to cool for several days before freezing.

VIRGINIA WILDLIFE FEDERATION OFFICERS

Fred M. Bell of Narrows, Virginia, is the new president of the Virginia Wildlife Federation, succeeding Dr. W. A. Pennington of Buckingham. Other officers elected at the Ocean View meeting are: J. D. Barhart, of Grottoes, and Jesse Cohn, of Portsmouth, vice presidents; Bill Newsome, of Bayside, secretary; and R. L. Gordon, of Norfolk, treasurer.

(L. to R.) Dr. J. L. McHugh, director of the Virginia Fisheries Laboratory, and I. T. Quinn, Commission executive director, and Dr. W. A. Pennington, outgoing president of the Federation, and Bill Newsome, secretary, seated at speakers table during Ocean View meeting.

STILL HUNTING: THE LOST ART

(Continued from page 9)

sounds he made. But until the deer received the hunter's scent, he didn't know whether it was a hunter or another deer. The noise had stopped. There was only the fresh scent of the hunter coming to the nervous deer. An hour, two hours—finally the deer decided to sneak out and move into the swamp.

A less skilled hunter would have not spent the time waiting. Even if he had decided to put his scent across the cover, he would have given it up after fifteen minutes or so. It takes experience to appreciate the importance of patience in hunting.

I have waited for a period of thirty minutes, unmoving, while a deer fed slowly out of some heavy cover, so I could see if it were legal game—all the time being quite sure that it was a large buck moving so casually toward me. There is no hunting thrill comparable to that! But it puts a premium on patience.

On other occasions I have moved deer by playing on their curiosity. Once while hunting along the base of a heavily wooded hill I sat down with my back to a tree, watching along the hillside. After a short period of time I was aware of movement in the brush about eighty yards in front of me. Something, I wasn't sure whether it was a deer or another hunter, was moving about in the vine maples. Watching closely, I eventually made out the dim outline of a deer. But there was no chance for a sure shot.

The deer appeared content to feed within the shelter of the vine maples, and would have stayed there if I hadn't hit upon a strategem for moving it out into the more open cover. I picked up a limb and broke it sharply. Just that and nothing more. It made a louder sound than a twig snapped by moving game. It was something to arrest the attention of the deer.

The feeding stopped at once. There was total silence in the thicket. Then the deer took a few cautious steps toward the edge of the brush. It stopped, waiting for the sound to be repeated so that it could be more nearly located or identified. After a period of several minutes, the deer resumed feeding. I broke another limb. This time the deer moved to the edge of the thicket and peered cautiously about, a beautiful buck.

That buck's antlers are over my desk as I write this, along with several others taken by still hunting. And each set of antlers brings to memory some pulse-throbbing episode enacted in the autumn woods with just myself and a rifle pitted against the game.

No less thrilling are those remembered times when the game won, when a big buck came smoking out of his bed and crashed away, leaving me trembling with the excitement of his going. Even when the game escapes there is never a feeling of futility and defeat. One has the thrill of seeing, or at least hearing, the game get up. It takes skillful hunting to get even that close.

Once one has taken a deer still hunting, other methods seem tame. There is a feeling of having played the game with the scales tipped slightly in favor of the hunted. And in these days of increasing hunting pressure, of decreasing game, that is a good feeling.

Wildlife Questions and Answers

Ques.: Is the bull-bat another name for the whip-poor-will?

Ans.: No, the bull-bat is another name for the eastern nighthawk. Both the whip-poor-will and the nighthawk belong to the family of goatsuckers, but when perched, the shorter wings of the whip-poor-will do not reach the tip of its rounded tail, whereas the wings of a nighthawk reach beyond the tip of its forked tail. The whip-poor-will's nocturnal habits likewise distinguish it from those of the nighthawk which may be active at any time of day or night, though it is more so just before sunrise and just after sunset.

Ques.: Has it ever been determined how much game is lost as a result of unrecovered cripples?

Ans.: The loss from this cause has been estimated at one fifth of the total take.

Ques.: Does the beaver have to make some special bodily adjustment when it goes under water?

Ans.: Yes, the throat and ears of the beaver are equipped with valves which involuntarily close when the animal dives, and open when it comes to the surface.

Ques.: How many fish hatcheries are there in Virginia and where are they located?

Ans.: There are four hatcheries and a trout nursery at Montebella. The hatcheries are located at Waterlick (smallmouth bass, longear sunfish, rock bass), at Stevensville (largemouth bass, bluegill bream, crappie) and two at Marion, for trout and bass respectively.

Ques.: Is it true that bear cubs are born during hibernation?

Ans.: Yes, bears usually hibernate all winter, during which time their young, generally two, are born.

Ques.: Has the wingbeat of birds been measured.

Ans.: The wingbeats of birds vary from two to 200 times a second, depending on the species.

Ques.: I read a newspaper statement recently that bats are blind, but I did not think they were. We have had quite a discussion about this and hope you can settle it.

Ans.: Bats are not blind. They have tiny underdeveloped eyes, but they definitely can see.

Ques.: Is maple sugar produced in commercial quantities anywhere in Virginia?

Ans.: Maple syrup is produced in large quantities in a number of Virginia counties, especially Highland and Bath.

Ques.: What bird has the largest and which one the smallest wingspread in proportion to body size?

Ans.: The albatross has the largest, but the biggest wandering albatross ever measured had a wingspread of 11 feet, 4 inches, not 17 or 18 feet as has often been claimed. The new Zealand kiwi has the smallest wings in proportion to body size.

Ques.: How many different lizards are there in the state of Virginia?

Ans.: Eight lizards and skinks have so far been described in Virginia: the fence lizard, ground lizard, blue-tailed skink. greater five-lined skink, Floridan five-lined skink, common five-lined skink, glass snake, and six-line race runner.

Ques.: Are there any reindeer in Virginia?

Ans.: No, there are no reindeer in Virginia and only a small number in the United States. Their range is far to the north of Virginia, primarily from the Canadian border northward.

Ques.: What is bicolor lespedeza?

Ans.: Bicolor lespedeza is a perennial shrub five to ten feet high, developed by the Soil Conservation Service specifically for bobwhite quail. According to Verne E. Davison of SCS, bicolor supports quail better than either nature or man has been able to do before. Particularly valuable as a winter feed for bobwhites, the bark is extensively used by rabbits and its flowers are attractive to honey bees.

Ques.: What was the principal game animal of early Virginia?

Ans.: The deer. Captain John Smith wrote: "Of beasts the chief are Deare . . ." and many other early writers seconded his opinion.

Ques.: Is there more than one variety of skunk in Virginia?

Ans.: There are two kinds, but the striped skunk or polecat is by far the most common. The smaller spotted skunk or civet cat occurs only in the mountainous parts of the state.

Ques.: Has ragweed any value for wildlife?

Ans.: Ragweed, bane of hay fever sufferers, is a very good food for quail and is readily eaten by doves and other seed eating birds.

Ques.: Can you tell me some of the Virginia place names which commemorate the buffalo which is now extinct in the state?

Ans.: Buffalo Forge, Rockbridge County; Buffalo Gap, Augusta County; Buffalo Junction and Buffalo Springs, Mecklenburg County; Buffalo Ridge, Patrick County; Buffalo Station, Nelson County; Forks of Buffalo, Amherst County. There are several Buffalo Rivers and Buffalo Creeks. Cow Pasture, Bull Pasture and Calf Pasture Rivers are said to have been named for the buffalo which once frequented their banks.

Ques.: One day this summer I saw the remains of a terrapin on the road. Beside it lay a big egg, almost round, and smaller than a hen egg. Do terrapins lay eggs?

Ans.: The common box turtle (Terrapene carolina carolina), which is commonly referred to in Virginia as a "terropin" does lay eggs. They are elliptical, with a thin, flexible white shell and the diameter may vary from 22 to 28 millimeters. Number per clutch varies from two to seven. The female digs the egg bed entirely with her back feet and the eggs are dropped one by one into the cavity and covered with earth which is tramped until there is little trace of the bed. Incubation takes approximately three months, depending on temperature and humidity. Evidence indicates that the newly hatched turtles go into hibernation for their first winter usually without eating.

Ques.: When did the forest conservation movement begin in America?

Ans.: As early as 1861 William Penn decreed that in clearing land at least one acre out of every five should be left in trees and there were many local ordinances and legislative acts to restrict timber waste during colonial times. The first national effort was made in 1828 when President John Quincy Adams, alarmed by the dwindling timber reserves for the navy, ordered a survey of the liveoak forests and established a 30,000 acre reservation on Santa Rosa Island in Pensacola Bay.

Ques.: I realize that most of the balsam firs used as Christmas trees are shipped here from Canada and more northerly states, but do any of these trees grow in Virginia?

Ans.: Balsam firs are found in some mountain sections of Virginia, particularly in the northwestern part of the state, for example, Highland County where they are quite abundant.

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